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FARM AND FIRESIDE

The National Farm Magazine

JULY 1919 5¢ A COPY



DRAWN BY H. F. WIREMAN

IN THIS ISSUE—"Alfalfa Joe" Wing



Old Colonial farm-house remodeled. Illustration shows it roofed with red Everlastic Multi-Shingles.

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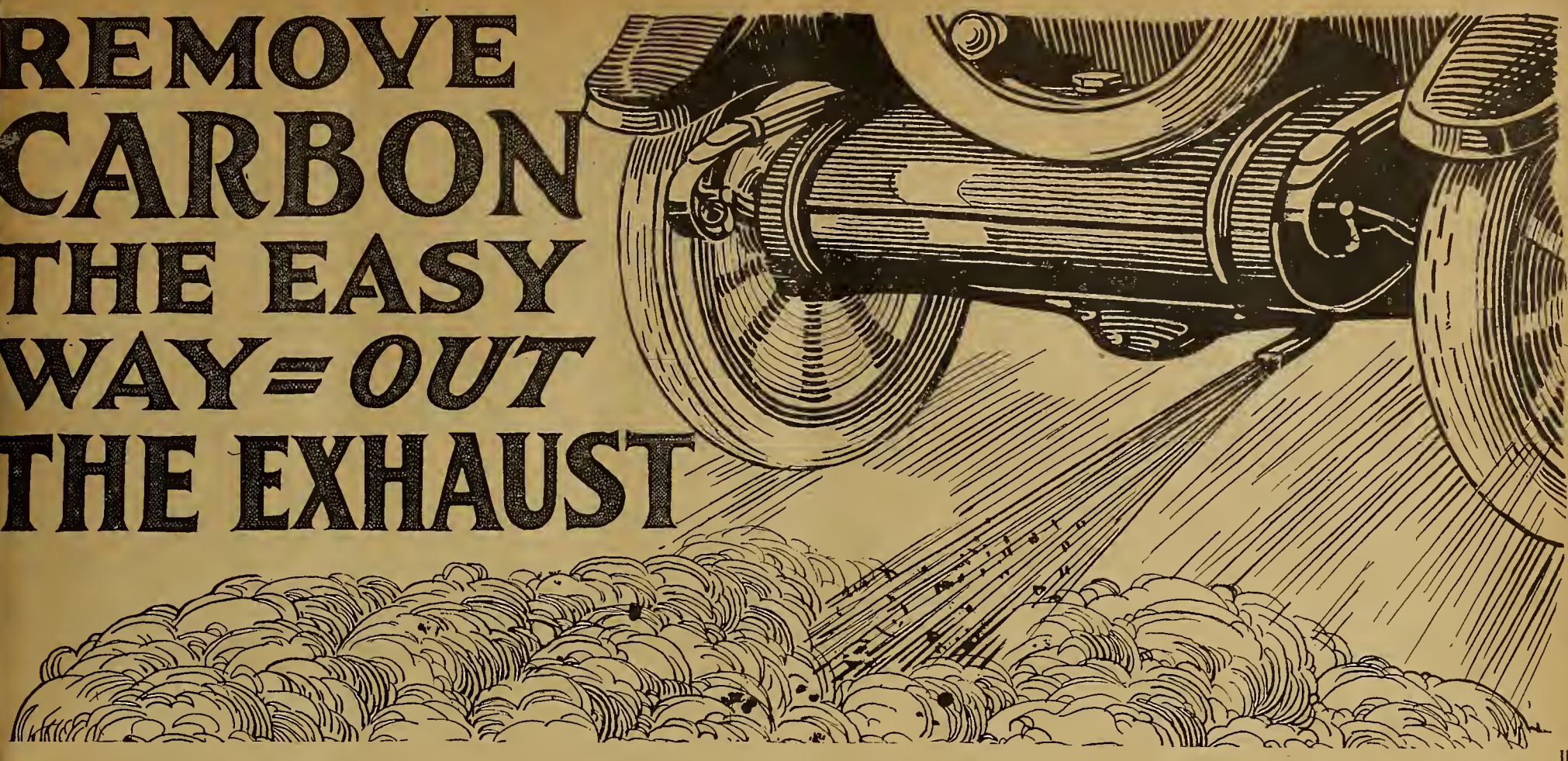
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Everlastic "Rubber" Roofing on a group of modern farm buildings, including silo at right.

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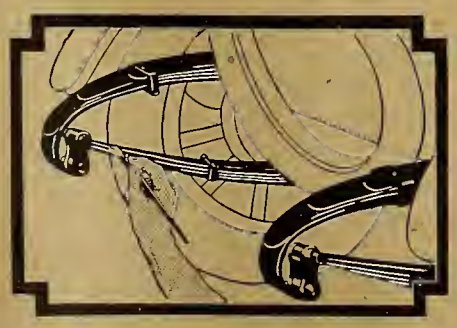


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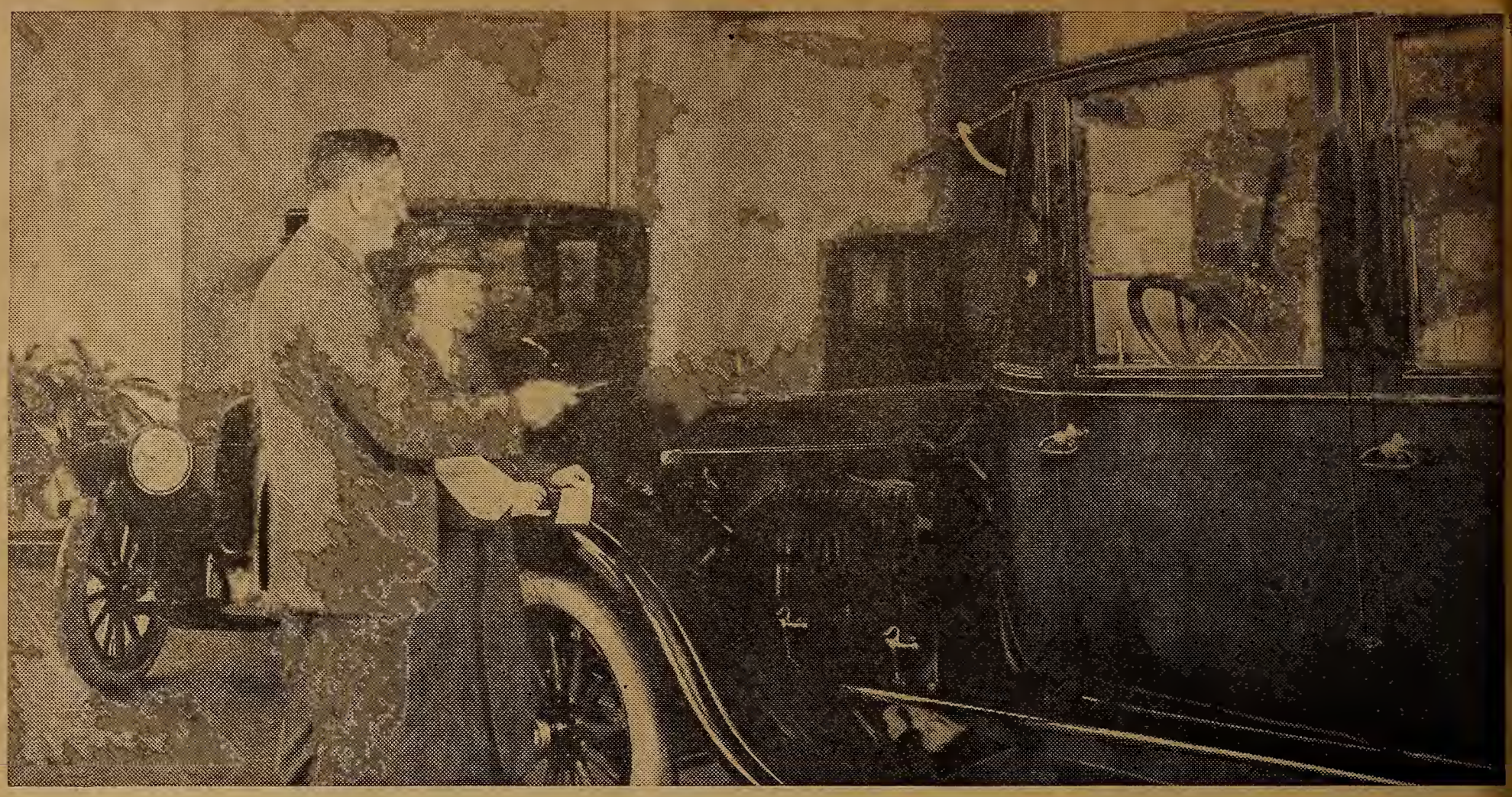


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FARM and FIRESIDE

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Prohibition—And Your Farm

By William Harper Dean

Illustrations by Jessie Gillespie



As it used to be — As it will be now

WHAT effect will national prohibition have on you and your interests as a farmer? Careful investigation from every angle that could possibly affect your interests in any way convinces me that:

1. National prohibition will not have any ill effect on you; and,

2. It may very materially benefit you as a farmer.

Perhaps you are a grower of corn, rye, barley, hops, grapes, and other raw materials that went into beer, wine, and whisky making, and you think I am taking a lot for granted when I say prohibition won't have any ill effect on your affairs, nor curtail your markets. Not so. I am taking nothing for granted, and I think that after reading this article you will agree with me.

The day this issue of FARM AND FIRESIDE came out we began the great American experiment of putting out of existence an institution which had spread its mat-like root system through top soil and into the deepest substrata of our social and economic soil. Alcohol, like Johnson grass or the pestiferous "wire grass," has been torn out by the roots. The heroic remedy has been applied. Is the cure one of healthy permanence for you and me? I think it is.

Nevertheless, we have got to argue against the benefits of alcohol as a yielder of colossal revenue, an employer of tens of thousands of men, a steady customer for millions of bushels of grain, carloads of grapes, tons of hops. We've got to meet the argument that a town "goes dead" when the gilded saloon is supplanted by the rusty pump, when "kickless" juices flow where once eddied races of "white lightning" and "fluid joy."

Time only will bring the everlasting verdict, but the great experiment has been launched, and conservative men who cannot be stampeded in one direction or the other are wondering.

The greatest point of concern to you as a farmer is the question of a "dry" market for the crops which hitherto have been marketed through channels emptying into distillery retorts and brewery vats. What will become of the corn, rye, barley, and hops you sold, for example?

There is but one way to answer this question. That is by using cold facts and stiff figures. As a matter of *fact*, this "staggering problem" refuses to stagger when the alcoholic propaganda in its system is drained out. Then it caves in.

Barley, more than any other crop, is going to be affected by prohibition. In 1917 a total of 65,610,000 bushels of this grain were used to make alcoholic liquors in this country. This is equivalent to 36 per cent of the 1916 barley production —182,000,000 bushels.

But in 1917–18 the barley used was less than in the preceding year—about 30,000,000 bushels; and the crop was much larger—211,000,000 bushels. Simple arithmetic shows that 14 per cent was used for alcoholic liquors. So the yearly average production of barley in the past five years was 215,000,000 bushels, and in the preceding five years 181,000,000 bushels, an increase in the yearly average production of nearly 35,000,000 bushels.

Brewing has not been the sole impetus for this increase, for in recent years there has been a steadily increasing demand for barley for feeding. If this feeding demand continues it will soon require all that was previously used to make alcoholic liquors —and then some. Will it continue?

Well, yes. Without going into well-known details of the boom in live-stock production in this country, which was in the making before the world-war holocaust, and which, when the world once more returns to a condition of near-normality, will attain a healthy permanence, it's a significant fact that our 1919 requirements of barley will strain our farm-acreage program to meet them.

Both this year and next year, Secretary of Agriculture Houston has stated officially, the European countries will need to import 179,000,000 bushels of barley along with their tremendous requirements of other grains. We will fall short 59,000,000 bushels of barley for our own requirements and net requirements of Europe, which cannot be supplied elsewhere. And this on the eve of national prohibition. Where is the menace to your barley crop claimed forthcoming as a result of the stoppage of brewing?

Many will tell you the real pinch will come when Europe becomes more nearly self-supporting and this heavy export demand is dead. Which would be reasonable, except for the fact that for years we have been creeping along with a short supply of meat produced at home, and that every day in dairying, beef-feeding, and the production of other meat animals there is a nation-wide expansion.

Our new American Merchant Marine is building specially fitted cattle ships for export of American cattle, and these holds must be filled with stock fed on barley and other grains. Nobody with ability to look ahead a bit can fail to laugh when they hear the future of our barley acreage serenaded with a dead march from John Barleycorn.

There exists the indisputable fact that while a relatively small percentage of our total barley crop hitherto has been marketed for brewing, yet the percentage of the total crop marketed after farm feeding needs have been taken care of hangs up a large sign of acknowledgment on the brewery doors.

Distilleries and breweries probably took nearly 70 per cent of the *marketed* barley though only a small percentage of the *total* crop. At the time the last census was taken these figures held, and undoubtedly hold good to-day. Also, brewing barley is of a higher grade than feeding barley. When the breweries have closed down, will this market be forever lost? Not as significant point at this writing.

For, in the first place, all the breweries are not going to close their doors. These tremendous investments in building and equipment are not going to be junked, "wet" pleadings to the contrary notwithstanding. For a long time we are going to hear this, and see all the lurid pictures of cobwebbed institutions, rusting machinery, and idle labor which a highly organized propaganda can paint. But while this is going on there is one firm, for instance, which has bought a string of some fifty breweries to operate these in terms of cattle feeds and harmless sugars and syrups.

There is a sugar which can be produced in breweries from barley worked through existing brewery machinery. It's called maltose. It is commercially feasible to produce this sugar in syrup form to take its place alongside corn syrup, for example. It's good for table use, excellent for preserving and canning. And already there are several thumping organizations at work readjusting brewery machinery and equipment to produce this very article.

A group of traveling salesmen waiting for a train in a small-town hotel, which was reeking its last with the fumes of liquor from a well-worn bar, got to exchanging views as to the effects of national prohibition. One of the group was a good listener for an hour, at the end of which the others turned to him.

"What's your line?" asked one.

"Oh, I'm a designer of brewery machinery," said the good listener.

"You see," exploded the questioner, "another great industry gone to junk!"

"Not by a blamed sight," calmly observed the other. "All the plants which used to manufacture brewing machinery which I designed are going to keep right on doing business. I saw and they saw the handwriting on the wall some six years ago. It wasn't a big job to change all our plans and designs [CONTINUED ON PAGE 36]



When You Use the Knife of Course the Patient Yells

THIS precious country of ours has just undergone an operation for the removal of its vermiform saloon. And naturally, as Mr. Dean points out, the patient is doing considerable yelling with the pain. But don't let that worry you. Keep thinking how much better the sufferer will be when the hurt subsides and the wound heals. Be cheered by the fact that the diseased part of its anatomy is out, and that never again will it feed upon and destroy the brains and bodies of our citizens as it has done for so long. No surgeon can do a good job without inconveniencing his patient a little, you know.

THE EDITOR.

Crops I Grew That Doubled the Value of My Run-Down Farm

By Francis Calvin Tilden

ONE day I saw a string of motor cars (perhaps a dozen), each crowded with farmers, on one of those tours of inspection now so common in the Middle West, moving along toward my place down here in southwestern Indiana. The farms along the road did not seem worthy of such a good highway. The land was rough, cut into gullies by never-ceasing erosion, leaving exposed on numerous slopes the yellowish brown of the Miami silt loam of the district. Here and there bits of woodland, remnants of forests of beech and oak that had covered this part of the State, showed ragged and unkempt, filled with underbrush and dead and fallen treetops. It was an uninviting landscape.

The leading car turned off the main road into my gravel road, and the county agent who was leading this tour of discovery stood up and stopped the procession.

"Here is the farm I want you to see," he cried. "It shows what can be done to run-down soil. Ten years ago this farm was worse than most of those we have passed. It was actually 'an abandoned farm,' so poor that it would not 'sprout clover seed.' I'd like you to notice the difference between it and the surrounding places, and see what ten years has done for it."

Of course that tickled me, but it is not vanity that leads me to write this story about it for FARM AND FIRESIDE. I do it because I believe the time has come in this country when we must look carefully to building up soil fertility if you and I and other American farmers are going to go on producing and doing our share in a business way to put farming on a business basis where we can all make more than a bare living out of it. And so much of the soil in this country has been mined that I believe anything I can tell you that will help you build up your land and keep it built up will be worth while for both of us.

The cars started on, past the deserted church in a thicket of second-growth timber, through a cut bordered on each side by sassafras trees that cut out the view. Then they topped the rise and my farm stood revealed.

Just over the fence was a field of alfalfa, ten inches high and thick and vigorous; beyond the alfalfa a field of mammoth red clover, the first blossoms just showing and almost hiding the 30 shotes, weighing around about 80 pounds, that were pasturing in it. Beyond the clover and surrounding an old, red-painted barn was a field of rye and winter vetch, the whole field purple with bloom. A little to the right a yellow-and-white, low, rambling house showed against a hillside green with corn.

And this is the story I told them about it:

"I bought this farm ten years ago. I knew something about it at first hand, too, for I had been born and brought up on a farm in Illinois; but what I knew of that Illinois farm did not fit this section of Indiana. There corn grew 15 feet high and oats were so heavy that it strained a binder to cut them, and here the corn on the upland looked like popcorn, and the oats were mere ghosts of the oats I remembered. I hadn't much money either, and I hesitated for a long time between putting it into good, safe bonds, or into a farm with lots of possibilities—big possibilities of failure and small possibilities of success.

Farm Misused Twenty Years

"The cheap farm that I could pay for was ideally located. It was a quarter section, four miles out on a perfect road, and with an interurban electric line touching one corner of the place, with a stop at that corner. The land was rough, and had been badly misused for twenty years. There was some good timber on it and a fine view, and I took it. I paid $29 an acre for it.

"The first two years were failures, which might not have happened on a better farm. My recollections of Illinois and its farms started me off wrong. I thought I could grow corn, oats, and timothy hay as I had done as a boy. I believed too much in commercial fertilizer. I believed I could add the needed fertility to my soil in commercial fertilizers. So I lost two years and had to start all over again. Commerical fertilizers are all right in their place. They will not grow corn on thin land with no humus and no 'heart.'



This is Mr. Tilden of Lafayette, Indiana

Do You Believe in Highway Robbery?

IF A first-class gunman stuck you up on the way home some night, and took all your crop money away from you, you'd think it was an outrage, wouldn't you? And yet, if you don't plant the right cover crops on your land to keep up the fertility, you are taking money away from yourself just as surely as a highwayman would do it. If fertility isn't kept up, yield will fall down. You know that, of course, but maybe you don't know just how to go about to correct it. If you want to know, write to us at 381 Fourth Avenue, New York City, and we'll put you in touch with the right people in your neighborhood who can help you.

THE EDITOR.

"Finally I was compelled to see that if that farm was to pay or to increase in value I must change my scheme. A farm, I found, was a special problem, as any business is. Farm problems are not to be solved wholesale. Each farm is a question of soil, capital, markets, labor, end in view, and a dozen other things. You have to solve your own problem, and you've got to use your head to do it. Farm work nowadays isn't all manual labor. A good deal of it is brain work.

"My problem was to make that farm pay the living of the young man that was helping me run it, and at the same time increase in value or pay me interest on my investment. The usual methods of the neighborhood would not do. I found that the only crops for which there was a local market were corn, wheat, and hay. Hogs and cattle could always be sold. My farm would not raise corn and hay in paying quantities. It looked as if I must raise hogs and cattle and sell them. But hogs and cattle were usually fed on corn, clover, and timothy. I could no more grow these to feed than I could to sell. The soil was too poor and sour for clover. I began to wonder if there was a crop that I could use on thin land, and feed with commercial fertilizers, that would do the work of clover both as food for animals and as a builder-up of the soil. I decided to try soybeans and cowpeas. They had never been grown in the neighborhood, nor anywhere within many miles. The next spring I made a start.

"I sent to Ohio for some pedigreed soybeans and for some cowpeas, and to Washington for government inoculation, and began. Two fields of each were planted. One field each of beans and peas with acid phosphate, 200 pounds to the acre; and one field each with acid phosphate and a ton of limestone to the acre, five-acre fields of each experiment.

"From the very first the soybeans did much better than the cowpeas. They grew taller and with more foliage, and therefore more forage. The cowpeas went to grain. With plants only 10 inches high the fields were one mass of pods. I wanted to cut them for grain, but could think of no way of threshing, for all the threshing machines had pulled out. Since I have threshed some by running through a corn shredder. I cut the peas for hay in September, and had a hard time curing them, getting a dark and slightly moldy hay that the cows liked very well nevertheless. The soybeans cured easily, and made a hay filled with beans and yielding nearly two tons to the acre. The limed patches did a little better than those without the limestone.

"I had the hay, now what was I to feed it to? I had always thought of the hog as a money maker, but how feed hogs on soybean and cowpea hay? I have done just that thing since, but did not know then that it could be done.

The Second Mistake I Made

"Here I made a second mistake: I decided to put in a small herd of cows, sell the cream, and feed the milk to pigs. I think the plan would have been all right if I had started with the right kind of cows. I was thinking only of the cream end, but for a small, one-man farm cream must be a by-product. Four or five cows such as the average man can afford to buy will not furnish enough cream to make a main item of income on the farm. I put in Jerseys.

"There was also another side to the problem. Peas and beans were hot-weather plants that had to be sowed, cultivated, and harvested at practically the same time. This made it impossible to raise many acres of them without too much hired help. Further, they did not seem to help me toward my great desire—to raise hogs. I wanted to raise hogs largely on pasture and turn them off in the fall with a minimum of corn. For pasture I wanted alfalfa, but I was told that with my soil it was useless to try for that. Then I read of rye. That fall I seeded two of the pea and bean stubblefields in rye, and in one of the fields tried another new crop for the neighborhood—winter vetch. My idea was to pasture the rye in the fall with brood sows, carry them through the winter on corn, and turn them and their litters of pigs on the rye again in the spring. I read that ripe rye could be fed to hogs in the place of corn, and that the hogs would harvest the rye themselves.

"So a rotation shaped itself in my mind: soybeans with acid phosphate, followed by rye and vetch, hogged off, followed by soybeans again, a short rotation with the least possible work and promise of paying well.

"That fall I bought sows and began putting the scheme into practice. The rye and vetch made fine pasture, at least twice as valuable as the rye alone. The farm had raised a little corn, and when the winter set in the sows were fed corn and tankage. One day I read that soybean hay could be used as a substitute for tankage. So we stopped the tankage and began feeding the hay. The hogs liked the ration, and I soon found that they could get along on much less corn when given the hay.

"We had a nice crop of 43 pigs in the spring, and started them on rye-and-vetch pasture with a little corn, as I had planned. It was soon evident that the hogs would keep the rye so closely grazed that there would be little grain. Our fields were too small. It was evident, too, that even with larger fields there must be a period of no pasturing if grain was to be had in any amount. We had no other place to turn our hogs, however, and had to see the rye fields eaten down close. It was clear that there must be another step in the rotation. Riding round over the county I saw plainly what that step ought to be. Just at the end of May, when I ought to have the hogs off the rye and had nothing to put them on, I saw, on limestone soil, alfalfa and red clover just right for hog pasture. I made up my mind for sweet clover.

"At the beginning of June I still had one of the fields of [CONTINUED ON PAGE 33]

Where to Find Success and Happiness in Your Work as a Farmer

By Joseph E. Wing

YOU may wonder why I choose to talk to you about work. Some of you feel as though you would be glad to hear no more about work for a long time. Indeed, we farmers bear the burden in the heat of the day, with a vengeance. I myself have worked in the mow day after day, with the thermometer standing sometimes as high as 114 degrees, Fahrenheit. I know a good deal about bearing burdens in the heat of the day.

The only reason, however, why we get tired of work is because we overwork. That is almost as bad a sin as the neglect to work at all, but very much less common, perhaps. Idleness is a vice. Overwork is a vice. It is a selfish sin, too. What right have you to take the bread out of some other man's mouth by doing work that he ought to do? For when you have done your part it is your duty to lay the burden down and let some other man carry it on—and pay him for carrying it.

Some years ago, after my father died and I was married and had undertaken to manage the farm, and was under a burden of debt, I tried to economize by not hiring enough labor. I worked early and late. Sunday I spent doing odd jobs that I had not time to do through the week. I came home tired, cross, unshaved, dirty, sweaty, without ambition enough to clean up. My wife did not leave me. Indeed, she pitied me and tried to reform me. That shows the strength of a woman's love. To-day I let the other fellow help do the work. I pay him for it. I see that he does it right, and parts of it I do myself. But I save enough reserve strength to help me think clearly; I try to live as I go along. Some get so firm a belief in eternity and its advantages over this life that they neglect this world as a place to live almost entirely. It is bad to do that. You don't know just what lies in the next world for you; it is your duty to live like men.

Blessed is the man who has found his work! Sometimes the work finds you. It finds you asleep, unready; it jumps on you and holds you down, and tussles with you and gets the best of you. I don't think there is any blessing in that condition. This world and its work is not such a hard proposition. As I look back at forty years of it I can see that the things that troubled me most never existed. The hardest jobs I ever did I did in mind only; they were things that never had existed and never would exist. The worst bridges I ever crossed I crossed a long time before I reached them, and when I did reach them I found they had been repaired and were safe crossing.

And sometimes when I tried to do three days' work in two I found that I had not done well, that I would have done better to have done each day what belonged to that day, to have done each day's task well, without worry, without hurry, without fret. And when I have thought that no other brain could plan like mine, no other hand could do like mine, sometimes I have *had* to go away, and other brains have planned better than mine could have, other hands have taken up my work and builded better than I could have builded. So I say, don't worry, don't fret, don't be anxious at all, for the world will go on without you, though nevertheless you are doing an important work in it. There is no man your superior if you are doing your work honestly and well. The commander-in-chief is no greater than the drummer boy, if he is a good drummer boy.

There is no work in the world at all comparable to farming and country life. God put Adam in a garden. Even before the fall we are told that he commanded Adam to dress the garden—that is, to cultivate it and prune it. He was *not* set down there to eat the bananas that dropped into his lap, to loaf and dream in idleness. He had his work to do. And the reason for this was that work was for the good of Adam, more than for the good of the garden. And after the fall we are told that God said to Adam that thereafter he should earn his bread, that he should eat his bread by the sweat of his brow. I think he began then to overwork sometimes, and to worry. Before the fall he had found his work, thereafter his work had found him. We must try to get back to where we find our work, where we are the masters of it.

To do work well we must do it easily. I was trimming hedge one day last week, trimming hedge and thinking of you and of what I am telling you, and it occurred to me that there was a lesson in that hedge-trimming. I like to trim hedge. I can trim it easily. I had taken time to sharpen the knife well so that whenever it touched a green hedge sprout it clipped it off as though it was nothing. The hedge had been trimmed often enough so that there were no old snags to cut off. So I trimmed away, seeing the thing grow into order and neatness. It pays to trim hedge in that way. It does not pay to have a hedge at all if you must let it grow up rank and tall, then assail it savagely with all your might, striking down and hacking it all to pieces, pricking your arms with thorns, breaking out in sweat and imprecations. A right cut on a hedge is a swift upper cut with a keen knife, done at least three or, better, five times a year. And if you can't do it this way, why, don't have a hedge at all.

We are rather apt to attempt too much, to attempt things not worth the effort. Successful men know what not to attempt. We can all be successful if we try to do what is within our powers. And we must not too lightly estimate our powers. Only we must not scatter. The new rifle shooting a 30-caliber bullet penetrates 22 inches of wood. Your handful of bird shot with the same charge of powder behind it hardly buries itself in the wood.

The reason many of us do not arrive at the station of Success is because we never start in that direction. That applies to endeavor of any sort. Success is apt to mean to you money-making. I like to make money. So do we all. It is useful in a family. I have noticed that. Most of you can be successful in that way. If you would be rich, two things are needed: You must make money, and you must save it. Not one of you but can make money. Hardly one of you but can save it. The trouble is you don't think it worth while to save trifles. The man who won't save a less sum than five dollars will never be rich. The man or boy who can save five cents will have a good chance to be a rich man. The wisest of us make blunders and failures. I have made them myself. Some of us make them over and over again, along the same lines. That is a road that does not lead to success.

Blessed is the man who has found his work! I mean the man who has found work congenial to him, fitted to his powers, to his genius. He is a happy man. Happiness follows work. Why? Because happiness itself is a form of energy. The idea that happiness comes from doing nothing is folly. It may come from rest that follows work; and that is one of the blessings of work—it brings rest. You can't rest until you are tired.

I know of no more unhappy people than those who make resting the aim of their existence. I had rather be a ditch digger than a millionaire who inherits his millions and spends his time eating when he is not hungry, resting before he is tired, seeing the world through dyspeptic eyes. All there is in life comes to the worker. The sun shines especially for him. The fresh air is for him. The cool and restful nights are for him. The fragrance of meadow and flower is for him. Strong, true thoughts come to him most easily. The world's greatest thinkers have been working men. The great leaders have been working men.

The great men of America have been working men—not necessarily poor men, but none the less, perhaps all the more, working men. There was never a more industrious man than Washington. He personally looked after the details of his great farm, and made it bloom as t rose. Thomas Jefferson was the most tir less worker. I have walked over his o farm, seen the trees that he planted wi his own hands, the buildings that he d signed and superintended the constru tion of, the college that he fathered, a the buildings there that he designed a helped build. When I see how wise a skilled he was in such matters it gives n new faith in his ideas of government a his views of life.

Coming on down, there was Abraha Lincoln. How he had drunk deep of t joys and sorrows of the working man! H had carried the burden in the heat of t day and felt the chill dews of night. H knew the common people, therefore l loved them. Men talk of the genius Lincoln. Was it genius, or was it an in mate knowledge of men and their conc tions, coupled with a very real love for the and a determination to stand for the wea to stand for the right "with malice towa none, with charity for all"? Surely the was the man who had found his work!

Then, there was our own Theodore Roos velt. Maybe he appeals to me because have been four years a cowboy, and b cause I go back to the old ranch again eve year and ride the old trails and live the o life, only very much more softly now th I once did. And Roosevelt was a ranc man in his day. I liked him. You liked hi Why is it? Because he was so earnest. H was so honest, so brave, so manly. He w such a fellow as you would choose for comrade. Born rich, yet he belonged to t common people. If he were President t morrow he would share his blanket with comrade, whether the comrade could sp correctly or whether he knew how to we a "biled shirt" or not. His standa seems the natural one of manhood. H hated a coward, an idler, a drone, a snea a thief. And so do you. That is why y liked Teddy Roosevelt. And then he cou have been a drone, an idler so easily hi self, if he had wanted to be. But he we out and found his work. Therefore, in t roster of great Americans his name w stand forever.

Now to the young man, so often anxio so often fearful, lest the world has no pla for him, feeling often that he is one t many, I say, be of good courage. The wor *does* need you. It needs you to-day mo than ever. It offers you its best gift—th is, *work*. There is work for you. You a not one too many. The world is looki eagerly for you. All it asks of you is: "I you know how to do something? Do y know it well?" The world is full of m looking for jobs that they have not fitt themselves for. The world is full of jo looking for men that know how to do the Learn how. Learn some one thing, a learn it well. You are wanted. I want young man who knows how to rig a pl to cut alfalfa sod, to adjust a collar n to hurt a horse's shoulder, to come on a harness his team before the seven o'clo whistle blows, to pick up a hammer wrench and put it where it belongs, and shut a gate. Oh, I do so need a man w can shut a gate! I have had men work f me who had a college degree and could re Latin, but who could not close a gate! want a man who can tell about a she when and how to feed them, and how care for little lambs. It is very easy, wh you know how. I know other men w are looking for such men. They are ha to find. I could place good, honest you men who know how to do those things positions where they could save mo money than bank clerks. They are scar There are plenty who can do problems algebra, and that is a help to them; w can ride a bicycle, and there is fun in tha who can sit up long nights at a card gam and I don't believe that pays; but to fi men who know the simple, old-fashion things that belong to the shepherd's pa of the world's work, that seems very dif cult. It ought not to be so. There oug to come out of the hills of old Muskingu young men trained in all the arts of t shepherd. Such men can find their wo very quickly.

Not all of our young men can be farme Some must go to [CONTINUED ON PAGE

It Couldn't Be Done, of Course, but Joe Wing Did It!

IT IS amazing how many things "can't be done" in this world—until some man comes along who does them. They told Columbus he'd fall off the earth if he tried to sail to a new land. They told Fulton his steamboat was ridiculous. They told the Wright brothers they could never build a practical flying machine. They told Morse his telegraph instrument was a joke. Yes, and they told Wing he couldn't grow alfalfa east of the Mississippi. But Columbus discovered America, the Wright boys conquered the air, Fulton's steamboat rules the seven seas, Morse's telegraph system covers the world, and—Joe Wing grew alfalfa east of the Mississippi.

We all admire *accomplishment*. We respect men who overcome difficulties. Why? Because we see our *possibilities* reflected in their *accomplishments*. We know that they are like us; that if one human being can do the impossible other human beings can too. This is one of the many reasons why you and I love Joe Wing. It is the thing that makes what he writes ring true. We know he has *lived* what he *says*.

THE EDITOR.



Jopeph E. Wing and the alfalfa plant he worked such wonders with

Things Fake Stock Salesmen Will Tell You to Get Your Money

By Louis Guenther

IF YOU have saved some money you should be on your guard against the financial "bogy man," for he will be soon around to get it from you. Just now he is especially active among the rmers; his weather eye is on the two and half billion dollars they will receive for is year's wheat crop. He nows that farmers are no less nbitious to increase their come than the rest of huankind. Already he has got any Liberty bonds from iem, and he expects to reap still richer harvest with his owing promises of enormous ofits on new oil and other ocks he has to offer.

Unless you learn how to cognize this blower of bubes, the financial bogy man is ing to have a good year in ie rural districts. Instead of gold brick he will sell you me beautifully colored eces of paper that would ok well on the kitchen wall. nd it would be wise, if you ve some of them, to make e of them so that they will ways be before you as a ily reminder.

This bogy man has been operly called a pirate of omotion, for he preys on gitimate business as much upon an unsuspecting pub-. With his dishonest pracces he sows seeds of discord d distrust in the field of nest enterprise. Without y flanges on his conscience keep him on the moral ack, this well-dressed and ooth-spoken human likess of Rufus Wallingford will outly affirm that it is perctly easy to earn three per nt a month on your savings ith absolute safety.

"What sense is there in lding government bonds hich bring you less than five r cent," he says, "when you n get three per cent a month safe oil stocks?" This is e tempting song that he is nstantly singing to credous investors. It is to this me that the financial bogy an is extracting Liberty nds from the homes of triotic farmers.

If you should suggest that ere might be greater risk a security promising such usual profits, and wonder if u would not be turning from investment to a speculaon, the bogy man would ickly reassure you:

"My good fellow, speculaon—what sheer nonsense! ankers hand such stuff to u because they want your oney at three per cent a ar so that they can reinst it to bring them in as uch as that a month. Why t do that yourself?"

They point to the large dividends that banks pay their stockholders proof of this, and more often than otherise get away with this kind of fairy ory.

One of the most successful of the financial bogy men—that is, successful in parting people from their money—started out r himself in the get-rich-quick field of romotion more than ten years ago, after aving had expert training with the otorious Burr Brothers, whose highly ccessful business of this character was idely interrupted by the Post-Office uthorities. This fellow already has more an a score of promotions to his credit, practically every field of endeavor, and now active in the sale of oil stocks which e predicts will make those who buy them ch.

One of his earliest promotions was a redging company, which is a good sample of the lot. About it he wrote as follows:

"It is the nearest thing to a sure thing with which I ever came in contact. Honestly, I can't see or figure any possible chance for failure. . . . It should be an immense, big money-maker; $1,000 up to $5,000 or more from a $100 investment should be a very reasonable ultimate earning. It's a square-deal proposition backed by a square-deal, honest, responsible, thorough business man."

How like the song of all the bogy men this sounds. In introducing this "square-deal" proposition to prospective investors this man said:

"The banker probably makes several thousand per cent from the use of your $100. Is this a square deal? The banker and capitalist will say it is 'conservative.' But is it fair? Is it strict honesty to take $100 from a man who doesn't meet many investment opportunities, giving him nothing to show for it—except a bank book—not even a receipt, keep the money for ten years, and for the use of it for all that time hand you $48? Is it even half a square deal?"

When some reputable citizens who had invested in this promotion found out that it was far from being a square deal, they demanded and saw to it that stockholders received their money back. Those who have bought stocks in his other promotions have not fared so well.

Pirates of promotion are no respecters of persons. They have people watching the death notices. The widow's pittance is as much grist for their mill as are the Liberty bonds which they are extracting in large quantities from folks everywhere. Wherever their trail leads, it is of grave menace. Among holders of Liberty bonds their operations have become so pernicious that even the Government has awakened to the necessity of doing something to warn the public—the highways and byways in some sections of the country are now posted with flaming signs warning everyone not to be swindled out of his Liberty bonds.

Through the Federal Trade Commission the Government is going even further to protect the public. This Commission has the power to prosecute those who report falsely to it, and can make public so much of the information it obtains as is in the public interest. To keep track of the bogy man's operations it has asked the public press to run the following notices:

WATCH THE STOCK PEDDLER

READERS: Get the names and addresses of all persons and companies offering you speculative or doubtful securities, particularly if in exchange for your Liberty Bonds or War Savings Stamps, with copies of their "literature." Mail them promptly for investigation to the

FEDERAL TRADE COMMISSION,
Washington D. C.

The Commission hopes by its investigation to put the stock peddlers out of business. But it takes time to get sufficient evidence for prosecution, and this bogy man works swiftly and bags his game quickly. Folks must therefore use their own intelligence, and every prudent man should first investigate carefully before trusting any stranger offering him securities, however plausible his story may sound.

There are certain outstanding marks by which a financial bogy man can be distinguished from an honest citizen. When once these marks are known the bogy man can be detected as readily as the leopard by his spots. If you have ever been on a "sucker list" you will recall some of these marks from the stock-selling literature you have received. Some may wonder what a "sucker list" is. Until the Liberty loans turned us into a nation of investors it was one of the principal tools with which these pirates worked. It is an aggregation of names of people who are branded as likely to bite readily at offers of big profits. You may have answered an advertisement of a financial character at some time, a friend who has bitten on some get-rich-quick proposition may have sent in your name as a good prospect, or your name may have got on a sucker list in some other way. These lists are sold and traded among the promoters, which explains why a new one tries his persuasive powers on you every little while.

But now, with one out of every four of our people Liberty bond owners, the bogy man has a much broader field for his hunting ground and does not have to rely on sucker lists. Many who have never met him before will now come under his luring propaganda. One of his first offers will be to take Liberty bonds at a higher price than they are quoted in the newspapers. But, of course, he does not pay cash for them. He can take them in exchange for his worthless security at any price. He then turns around and sells the bonds on the market, and practically all that he gets for them is clear profit to him.

Another one of the tricks that now seems most successful is a flimsy scheme for "protecting investors against loss"—a makeshift "guarantee" which will break down when put to any test. Two such schemes are now being used extensively. They are bonds that are supposed to guarantee you against loss. You should be on the lookout for them. Tons of printed literature are passing through the mails bearing the alluring appeal to investors of the so-called bonds. They are not a guarantee against loss, as is claimed. In a final analysis they are nothing more than "scraps of paper," cleverly designed to lull the investor into a feeling of false security.

[CONTINUED ON PAGE 34]



The stock certificates are beautiful—and worthless

There is No Royal Road to Riches, But Lots of Them to Ruin

WHOEVER said there's a sucker born every minute should have added, "and two crooks to trim him." Hard-working crooks, too. Half the time and energy they devote to figuring ways and means of parting honest men from their money, if devoted to decent business, would make them rich and respected in a few years. All the more reason why we should be doubly on the lookout for them. They have a new bag of tricks, freshly organized worthless companies with high-sounding names and imposing personalities with every sunrise. And the only way to beat a crook who is constantly on the trail of our cash is to be constantly on the lookout for him. We will try to keep you informed of each new brand of fake stock skullduggery as it is developed. If you know of any of these bad eggs in your locality, send us full details about him and we'll put the right authorities on his track. And if you are tempted by one of them, always remember that there is no royal road to riches, but plenty of them to ruin.

THE EDITOR.

Wise Bankers Are Helping Good Farmers Does Yours Help You?

By Louis M. Tobin

Editor of "The Banker-Farmer," Champaign, Illinois

CARL SONNICHSEN, a Connecticut farmer, leaned over the counter of the New Haven bank, shook hands with the cashier, and explained that he wanted to borrow some money.

"Tell you what you do, Carl," the cashier interrupted. "We want to look after you. We figure the best way to do it is to have somebody around here who knows the farm game from top to bottom and can give all his time to it. So we got a good man. He's a pippin, too—born and brought up on a farm. I want you to get acquainted with him."

An hour later Sonnichsen was showing the man around his farm. He was secretly a little pleased. No banker had ever visited it. He reserved judgment on this new-fangled notion, but this chap seemed all right.

"Now let's look over your books for last year," suggested the visitor.

"Tell the truth, I'm not much on bookkeeping," the host confessed. "I guess I can figure up the outgo and income from my bank book and my head. But—"

"I get you," the man from the bank smiled. "It seems like prying into your personal affairs. But think a minute. The other day old Andrew Simpson—I guess he's as well heeled as any man in town—wanted to borrow some money to expand his business. He came in with a statement of every cent he owed and had coming. He explained just what he wanted the money for. That let the bank see if his business was in good shape, if the loan was going to make him money, and, so, if he would be able to pay it back. He put all his cards on the table, and it was a good thing for him, and the bank too."

That *did* put the matter in a different light. If stiff-necked old Andrew didn't think it humbled his pride, why should *he* object? So the farmer and the bank man made up the statement. It showed fairly good, although the farmer conceded that the dairy returns, now that he saw them in black and white, were not what they ought to be. That interested him, because the loan he wanted was to buy more cows.

"Thought anything about registered stuff?" inquired the visitor.

"Well, a little; but they cost a lot."

"That's all true enough, but you've got cows now which aren't paying for their keep. Your dairy costs and receipts show that. If you borrow money to buy more inferior cows, what good will it do you? What's the use of borrowing money if it isn't going to make a profit for you? Why not start with just one registered cow, perhaps a Holstein?" suggested the banker.

There was discussion, but Sonnichsen assented. They fixed up the loan and worked out a simple system of accounts for the farm. Then Sonnichsen made bold to ask the question that had bothered him a little. We're all suspicious of "something for nothing."

"This is real neighborly of you, but what do you fellows get out of it? All this kind of work is going to cost you something, isn't it?"

"Yes, but if we can help you to make more money we'll make more money, too. You'll deposit more. You'll make more. On top of that the whole community will benefit. More prosperity, more for us as well as you and everyone else. That's logical, isn't it?"

Sonnichsen nodded. He had never thought of it just that way. He acknowledged a parting wave from his visitor.

So the farmer got his registered Holstein—and more. A few weeks later there was a beautiful heifer calf. Sonnichsen was immediately offered $100 for the calf.

"Why not raise the calf yourself?" suggested the bank man. "If it's worth $100 to someone else, it's worth that to you."

Sonnichsen turned down the offer. During 1918 the cow produced 10,000 pounds of milk. Result: The farmer sold off his poorer stock and replaced them with a few high-producing animals. There's a change in the size of the milk checks—for the better. And that does help.

When Sonnichsen figured up his accounts for the year he found that he had increased his net worth by about $2,000. And he made a special trip down to the bank to tell the banker about it, because he figured that his co-operation was in a large measure responsible.

This is a simple, unspectacular story. But it is as true as gospel, and it gives you a concrete instance of the working out of an idea that is fraught with vast importance to two great factors in national progress—agriculture and banking, you and me.

The man who converted Carl Sonnichsen to better cows and more money was Raymond K. Clapp of the First National Bank of New Haven, Connecticut. The incident is only one of many in Clapp's experience. For he is a banker-farmer.

The banker-farmer had his start back in 1914 when bankers were beginning to realize that agriculture was the founda of all prosperity, and that they had a d in helping to develop it.

There was a barrier—intangible, still a barrier—then between the bar and the farmer. They didn't underst each other.

In the minds of many farmers the bar was a hard-shelled, crusty custodian cash which he would loan if he wanted but like as not didn't want to, for s mysterious reason—probably indigest

Then, when the average farmer thou of the banker, he was likely to visualize chop-whiskered, plug-hatted plutocra the cartoonist, bulwarked behind bag money in wicked Wall Street, far from open country. There were self-seel demagogues who helped to maintain tradition.

The truth was that 20,000 of the 28, banks in the United States were "count banks, 12,000 of them in towns of 1, or less population, managed by banl who were far from being fabulously off, were as common as dirt, and could have been chloroformed into a plug ha

So the bankers' state associations org ized committees on agriculture, first o to arouse the interest of their bank The American Bankers' Association crea an agricultural commission as a clea house of inspiration. The banker-far movement, with its slogan, "Take inte *in* the farmer as well as *from* him," was b

Bankers and farmers have been brou closer together, with beneficial results themselves and nation. The recent ference of bankers with the U. S. Dep ment of Agriculture at Washington, ur the auspices of the American Bank Association's agricultural commission, a climax of years of fruitful effort devo to this important ideal.

"Our agricultural department has its object the application of busi methods to agriculture. We believe tha farmers are lax in their methods, or failing to use all available means for proving their condition, the fault is large part with the bankers," was the fr admission at the outset of the Plymo County Trust Company of Brock Massachusetts, one of these pione Another important statement was this

"We hope to do more than merely de mine the ability of a farmer to carry a l We want to develop his material welfa

Here was an ambitious program, this Massachusetts bank carried it ou well and in such detail that its work been one of the principal inspirations for growth of the bank-agriculturist syste

Things began to happen in Brock Dairying, in the judgment of the ba agriculturist, offered a profitable fiel its small farmers. Inside of two years cows, which cost $55,000, have b brought in and sold at cost. The b bought two pure-bred bulls. High-g heifers were placed with boys and g Grain and hay for feed were imported the carload. Milk scales and records v introduced.

Keeping books on cows had been pra cally unknown. But in two years m farmers were keeping records and, st ingly enough, [CONTINUED ON PAGE



A type of animal encouraged by the hog man of the Plymouth County Trust Company, Brockton, Massachusetts

Your Banker Should Take Interest in You, as Well as from You

WE STOLE that headline from this article because it's a good one. Truer words never were said. You, as an American farmer, are facing a new day—a day in which you will be a business man as you never before have been a business man, when the financing and executive side of your farm will demand just as much of your time and ability as the actual growing of crops and feeding of stock. There is a great deal of help that the banker can give the farmer in this reorganization of farming on a business basis; and, thank Heaven, it begins to look like the bankers and the farmers are beginning to get together on a real co-operative business basis. THE EDITOR.



The bank-agriculturist idea has crossed the continent. Here are cattle brought in by the Farmers Savings Bank of Walla Walla, Washington

Our sloping pasture lands
are filled with herds.
James Whitcomb Riley.



Photo by John Kabel

It's a Whole Lot Better to Stumble Once in a While Than to Walk Forever in Fear

By Bruce Barton

NOT long ago I met a wealthy man who was worried almost sick about the future of the United States. He can see nothing but disaster in the next few years; and as rapidly as possible he is selling all his property and putting the money into Liberty bonds.

As I talked with him I could not help but remember an incident that occurred in the summer of 1914—immediately following Germany's declaration of war.

A group of prominent bankers were seated on the porch of a fashionable hotel. You would recognize many of their names if I printed them. They were adding to each other's sorrows by repeating the reasons why the war must bring destruction to us.

They summoned up at least a dozen absolutely insurmountable obstacles, and one of the obstacles was this—that there was not enough gold in the country to pay the interest on certain bonds of New York City which must be paid in gold to foreign holders that autumn.

That was late August, 1914; in less than six months those same bankers were consumed with a new terror. The country was full of gold; it was pouring in to us by every boat. And in their paneled offices they sat and trembled over the panic that was sure to come because we had so much.

I would not seem to pick the bankers out for special comment; they are merely human, and typical of the rest of us. A large proportion of the average human life is spent in fearing things that for the most part never happen.

We are all, to some degree, cousins of Mr. Fearing of "Pilgrim's Progress," who was "always afraid that he would come short of whither he desired to go."

We fret because we have not money, and when money comes we begin straightway to worry lest it shall fly away again.

We worry about ill health, and by our worry make the work of bad germs easy upon us.

Only recently the manager of a great interstate business told me that he had been getting up some figures on the influenza epidemic to submit to his customers in various States for their encouragement. And his study revealed this interesting fact—that the epidemic was, generally speaking, worse in just the proportion that the community took panic measures to avert it.

Sir Walter Raleigh was wrong on many points, but he was never more right than when he said that it is better to be dead than to live a coward. Yet most of us live just that way, slinking fearsomely through life when we ought to step forward boldly.

Let's try to forget ourselves a little more. Let's nail Stonewall Jackson's motto over our desks, and resolve never "to take counsel of our fears."

The mere resolve will not do it, of course. Negative states of mind are not dispelled except by positive virtues. The cure of fear is not precept, but faith.

Lift up your eyes a little higher. Look a little more often at the eternal hills which for so many centuries have looked down upon the petty concerns of men, and at the stars whose blinking is nothing but laughter, because foolish men who have so few days to live should waste a single moment of their precious time in fear.

Those who travel with their eyes upon the stars run some dangers. They will inevitably fall sometimes into potholes in the road which more prudent men see and avoid.

But it's ten thousand times better to stumble now and then than to walk forever in fear.

Lift up your eyes, for in so far as you succeed in holding them high you have conquered the meanest of men's vices—fear—and lifted your soul into the intrepid company of the spirits of the great.

What You Can Do to Save Your Crops from Bugs and Pests

By F. F. Rockwell

I HAVE invested a good deal of valuable time, money, and experience during my life as a farmer in finding out exactly the best remedies for that army of bugs and diseases that attack our crops year by year, and sometimes ruin them. I am passing along what I have learned to you, at the request of the Editor of FARM AND FIRESIDE, in the hope that it may save you money this year and in years to come.

Perhaps the most important thing I have learned is that you not only have to have the right remedy to kill certain bugs, but you must know precisely the correct way to use it, or it won't work. I learned this from sad, costly experience.

One year I decided to go in and clean up on a big melon crop. It looked like real money and a pretty sure thing. The situation was this:

Melons were in great demand by the "summer" folks. For two years all the surplus melons from my garden had been engaged at good prices even before they began to show color. Nobody in the section grew any melons for sale. The only ones available in the village store were soft, mealy, and insipid when they weren't hard and green. And every summer, cottagers wanted melons for breakfast. And for three years I had taken the blue card at the county fair and had plenty of melons to eat.

So I started early. I got sod from a good, rich spot in the pasture, cut it up in squares, and planted the seed in a frame; and by mid-June I had as nice-looking a quarter acre of melons as you would want to see. Of course, a quarter acre of melons isn't much of a patch—not where they grow melons. I had never seen a Jersey melon patch in those days. But it was the biggest patch in our county, or in our half of the State, for that matter, I suppose. The market for those melons had its mouth just watering, and I would go out and look at them by moonlight and figure the profits!

Then there came a day when the patch somehow didn't look quite so robust and green. Could it be that the chicken manure compost I had put under those melons was playing out? I didn't think so; it never had before. I gave them a little top-dressing of nitrate of soda, which I had found would cheer up a crop like a jug of cider at the end of a corn row would cheer the half-Indian hired man we used to have when I was a kid.

Leaves Were Covered with Lice

But, somehow, those melons didn't respond, so I watched on anxiously from day to day. Undoubtedly getting worse! Something was *wrong*. More and more leaves were curling up and turning brown. And then I made a careful examination. And on the under side of the leaves, entirely out of sight to casual observation, I found fat, sluggish, gray-green, disgusting lice—by the score, by the hundreds, by the tens of thousands!

I rushed over to my next neighbor. I had only been farming it for a few years, and he d had a lifetime of it. Surely he could help, as he had in other matters. At his suggestion I dusted the vines with Paris green. That didn't work; and someone else suggested spraying with arsenate of lead. No good. Tried one thing after another; the lice grew fat and the vines died—and with them my vision of some real profits from a market-garden venture. A whole crop lost, directly because of the melon louse; but really, if indirectly, because of my ignorance. And for many years I continued to suffer losses from insects and diseases attacking my various crops. Never again quite such a disappointment, because I got into the frame of mind of the Irishman who was asked, when digging his crop of potatoes:

"Well, Mike, how are the spuds turning out? As well as you expected?"

"No," answered Mike, "but, begorra, I didn't expect that they would turn out!"

But the surprising thing about it all was that my neighbors, who were as old at the game as I was new at it, suffered as much as I did, and seemed to take their losses for granted. They seemed to accept as a fact that there had been added to the two ultimate certainties, death and taxes, a third—bugs. And there wasn't much to do about it.

The local store put in stock every new "remedy" that was put on the market, and many of us tried them out. In those days the manufacturers made about every claim that could be thought of. Some remedies were literally supposed to destroy weeds and make plants grow as well as to kill every kind of bug and blight pest known to civilization—and their testimonials would prove it!

The state experiment stations patiently tried out these patent cures, and year after year published the results. There were so many fakes that some state officials became prejudiced against these preparations as a class. But the better ones have survived, and in many cases have received the recommendation of those who ha carefully and scientifically tested the Efficiency, however, is not the only fac in the use of insecticides and fungicid Spraying, of course, is done for profit, a *cost* is a vital consideration.

The average farmer, however, has be very slow to follow up and use to t advantage the information and the resu of careful experiments which the exp ment stations have made available for hi This has been due in some measure to t fact that experiment station literature a plain everyday farm talk are two v different things. The better educated far ers—and, though increasing, they are s a small minority, the country over—co translate this literature into the terms their own work; but the others could or wouldn't—and as far as results are c cerned the effect is the same. The cou agent, the liason officer of the agricultu army, has done much to bridge this gap tween the division of experimental resea and the division of hard—and often hi bound—practice.

This, however, is running ahead of t own experience. After a few years search for a "cure all" for crop ailment began to accept the attitude of the fata so far as real protection was concern Some things worked—sometimes. And general principles we kept up a desult bombardment of the enemy—a sort guerilla warfare in which, usually, we the worst of it. Out of the scores of inse and diseases, and the scores of cures a remedies, we occasionally got the ri combination without realizing just wh was right.

Insect Control Not Widely Understood

And that is still largely the condit to-day. It is not putting it too strong to that not one farmer in five has as intellig an understanding of the problem of ins and disease control as he has of most of other problems. He prepares, months advance, crops for his winter feeding, a fertilizer for his crops. But the farm wh you can find a full supply of ammunit for the battle on bugs and blights i very striking exception to the general r

What *is* a "full supply of ammunitio

It does not mean that it is necessary the farmer to stock up with a sample all the cures and remedies he sees adv tised. Not by a long shot. He needs bu very few things, *if he gets the right ones*.

But in order to get the right ones must know something of the character a habits of the enemy he has to fight. As th are several scores of insects and disea which are likely to attack many of orchard, field, and garden crops during a season, this may seem like a pretty order. But it is not necessary to kn them all, intimately, individually. should, of course, be able to recogn what each one is. That is not difficult, there are many government pamphlets a booklets, many of them fully illustrat which will serve to introduce by name a bug or fungus you wo like to meet. And y county agent ha speaking acquainta with most of them.

The first thing to r ize is that *all* of the b and insects belong to *f* general classes or grou When these are lear one has a general b for their control.

GROUP ONE: The f group includes the *ch ing* insects. The comm potato bug, the tent erpillar, the cabba worm, are examples this type. They are ea recognized, because tl work is immediately parent. You can where they bite.

Control: These ch can be killed by supp ing them with some *ternal* or stomach pois

[CONTINUED ON PAGE



A good pressure sprayer and nozzle equipment enables the operator to drench the *under* side of the leaves

Bugs, Like Humans, are Queer Beasts and Require Study

THE reason we don't get along with certain folks sometimes is because we don't understand how to approach them. And by the same token we often fail to kill the bugs that bite holes in our crops and suck the life out of our growing things. We don't know how to get at them. Anything is easy *when you know how to do it.* Every insect in your list of bug enemies has a weak spot somewhere in its make-up; and Mr. Rockwell, the writer of this article, who has not only fought them, but studied them for years, gives us a good line on the deadly dose for every pest that ever waved a defiant wing at a farmer.

THE EDITOR.



A good sprayer and spray materials cost money, but they constitute the cheapest and most valuable insurance you can get anywhere on the farm

What Two Kentucky Farm Girls Did

By James Speed (Kentucky)

WHEN the writer met Bessie Brown and Eulala Lewis walking across the campus at Berea College, entucky, it was hard for him to believe at they had done the work of boys last ason. In fact, he felt inclined to laugh; t he kept his face straight and said: "I can hardly believe that you girls



Bessie Brown and Eulala Lewis walking across the college campus

e good plowmen, as they tell me you are. nust confess you two look as little like ys as any pair I could wish to meet." Bessie Brown at once flashed back, "If u'll find us two plows and teams out- e of town, we'll show you whether we n plow or not." Hurried arrangements were made, and half an hour your correspondent, Mr. bert Spence, the county agent, and the ls were two miles in the country where o plows were breaking land for corn. hen the men who were plowing learned at was wanted, they smiled quietly and gave their places to the girls, who had been transformed into a pair of sturdy-looking lads in overalls and caps.

The girls clucked to their teams and moved slowly down one side of the field. There could be no question as to their familiarity with teams and plows, because the furrows they turned were clean and straight. Even when they came to the corner of the land they were plowing every movement showed they knew how to ease the plow around to make a square corner. Even the little knack of putting the weight on the handles of the plow was used to perfection.

Back at the school both of the girls were very willing to talk about the boys' and girls' club work they had done, and the regular farm labor they had performed last summer and autumn. Both of them had become interested in club work in the spring of 1918. Bessie Brown grew an acre of corn, and Eulala Lewis cultivated onions. Because of extremely dry weather in the foothills of the mountains, where these girls live, neither of them was very successful with the crops, but this has not discouraged them in the least.

Bessie Brown, in answer to numerous questions concerning her work in the fields, said:

"Although I didn't raise much corn last year I'm going to try it again this year, and maybe I'll do better.

"While I was doing my club work I turned 15 acres of corn ground for my father. I harrowed it, and helped plant it by hand. I plowed the corn four times with a double shovel, helped cut and shock the corn. My younger brother and I hauled in every bit of the corn and fodder.

"I helped shock 40 acres of buckwheat, and helped haul it to the thresher. When we threshed the buckwheat I took the place of my brother who had joined the navy.

"After getting all of my farm work done I decided to come to Berea and attend school. I have been here since the first of the year, but am going home soon to take up again my work on the farm as a club girl, raising poultry and growing corn as a regular farm girl. It is lots of fun to work on the farm, but the big pleasure comes when you get your certificate from the College of Agriculture of Kentucky, entitling you to one-half unit credit in high school."

The smaller girl, Eulala Lewis, had the following to say about her experiences as a man on the farm:

"Besides growing my onions I plowed our half-acre garden four times, and cut and raked two acres of hay and helped haul it in. When the threshers came we could not get hands enough to do the work, so I took a man's place helping haul buckwheat and wheat from the field to the machine.

"Last fall my father was traveling for a seed company and was not at home in time to sow the wheat, and he sent money home for us to have it sowed. I told mamma that I could sow the wheat, and she could use the money to buy clothes and other things that I would need to come here to Berea to school.

"At that time I put on my overalls and cap, and went out to prepare wheat land. Some of the neighbors remarked that Mr. Lewis had a boy and a girl about the same size, but they never could see both of them at the same time. The fact of the matter is that the girl was the boy and the boy was the girl.

"There was a man going through the country with a threshing machine, and he came to our house. When I went to where they were, he thought I was a boy and he said, 'Come here, Johnny, I have a job for you,' and it was a long time before he found out that I was not a boy.

"I put the wheat on land where buckwheat had been, and it did not have to be turned. So I disked, harrowed, and dragged the land and sowed it. There were about nine acres. The wheat is looking fine at this time."



They knew how to ease the plow around to turn a square corner

How I Pick Hired Men Who Will Stay With Me

By A. L. Keltner (Colorado)

HAVE found in my experience that there are farmers and ranchmen, otherwise excellent managers, who are always the lookout for a cheap hired man; d there are other men who put the pay the help on a sentimental basis—who y they wish to be generous and fair,



A. L. Keltner

d so will not ask a man to live on the allest wages. In dealing with my men liscard sentiment; I find it good business pay a hired man well.

Not long ago a fairly successful farmer allenged our firm with paying $25 more a month than he did for a hired man, and he insisted he had as good help as ours. This seemed true, but his man has since left him, and ours will probably never leave us to take another hired man's job. If he leaves, it will be to work his own place.

The qualities I have found it well to look for in a man are mental and moral qualities. I take for granted that the ranchman selects an employee with brains enough to do the farm work. This brings us to the moral qualities, and foremost of these is the capacity to stay by a job.

The type of hired man that won't stick is *always* cheap if he's hungry; when he isn't, money won't tempt him. I know all about him, as we hired a gang of floaters last summer for an unexpected crush of work. We found that the floater wants to work a week and then live on the proceeds.

One difficulty confronts us here: Many farmers say it doesn't pay to keep a hired man through the dull winter season. We hold that it is the business of a live farmer to have no dull season. In summer our man does general ranch work; in winter we turn a bunch of cattle on the place to be fed. This enriches our place, paying dividends besides. If any dull days come our man works improving the place—he always has directions for several improvements.

Another priceless quality in any branch of labor is ambition. We want a man who will stay with us, and who won't stay *too long*. If a hired man hasn't ambition enough to want a place of his own he hasn't enough to do our work as we want it done.

There has been some profit-sharing on ranches around here. I don't see that it works. Ambition doesn't get play in sharing a few dollars earned by another man's management. It's getting play for one's own ideas that counts. So we direct our own business, and we hope our hired man will direct his, and thereby win success.

In the first place, he puts money in the bank to buy land. He has a cow, and we feed it; chickens—we feed them. We provide him with a neat home, a horse and buggy, and a garden spot. Also we pay him $75 a month, and *we ask nothing of his wife*. She doesn't cook for extra hands; she makes butter and markets eggs and garden stuff. Most of the side enterprises are hers, but she has the use of our machinery, and we'll let her husband off when we can to help her.

We want a married man because they are more ambitious. Once we had to stop work and put up a fence because our cattle got at the week's wash of the hired man's wife; but we prefer the type of man whose wife takes pride in her wash.

This is how we make it worth a man's while to please us.

Does it pay? Well, we're not running business haphazard. We have calculated even the interest on the seventy-five a month, which, of course, we have to pay in advance of receiving our crop. And we can say that far more than the additional wages we pay our man would be lost if we hired a cheap helper. Also, *we get our money back for his winter work.*

"A Weird Mix-up"

ONE of the small state papers," says *The Great Bend Tribune*, "published an item this week in which was a weird mix-up of an account of a wedding and an auction notice." Following is the most interesting part of the item:

"William Smith, the only son of Mr. and Mrs. William Smith, and Miss Lucy Anderson, were disposed of at public sale on my farm one mile east, in the presence of seventy guests, including two mules and twelve head of cattle. Rev. Jackson tied the nuptial knot for the parties, averaging 1,250 pounds on the hoof. The beautiful home of the bride was decorated with one sulky rake, one feed grinder, and two sets of work harness, nearly new, and just before the ceremony was pronounced the Mendel & Sons wedding march was rendered by one milch cow, five years old, one Jersey cow, and one sheep, who, carrying a bunch of bridal roses in her hand, was beautiful. She wore one light spring wagon, two crates of apples, three racks of hay, and one grindstone of muslin de soie, trimmed with about one hundred bushels of spuds. The bridal couple left yesterday on an extended trip. Terms spot cash."—EXCHANGE.

PRIZE CONTEST ANNOUNCEMENT: $15, $10, $5, and $3 for the best answers by farmers to the question, "How Do You Get and Keep Your Farm Help?"

If you have worked out some scheme for picking the right kind of men, and so handling them that they are glad to stay with you, why not pass the experience along and show your fellow readers of Farm and Fireside how to do it? Labor is such a hard problem to deal with that you almost owe it to the other fellow to show him how you solved your part of it. It is advisable that you keep your answer to 500 or 600 words, and it should be mailed so that it will reach us at 381 Fourth Avenue, New York City, not later than July 23d. THE EDITOR.

You Can Increase Your Threshing Yield Three to Five Per Cent This Way

By D. S. Burch

THE writer of this article, formerly an Associate Editor of FARM and FIRESIDE, was closely associated with the work of the Grain Threshing Division of the U. S. Food Administration, which last year resulted in saving more than 21 million bushels of wheat in 21 States. Read where the big leaks are and how to stop them.
THE EDITOR.

YOU wouldn't leave your small change at the paying teller's window just because you had a fat roll of bills and didn't need the small coins at the moment. No. And you wouldn't keep a milker who thought it was too much trouble to strip the cows. Of course not. But until last year, when the U. S. flour bin was nearly empty, you and I paid little attention to the grain that went into the straw stack, providing a nice amount came out of the grain spout. Nor until then did you hear much about grain-tight bundle wagons and raking shock rows.

There were exceptions, of course, among the very thrifty, and among those of us who knew what a first-class threshing outfit could and should do. But more generally it was the case of "everybody's business," which means that nothing of consequence was done in an organized way. So when harvest time rolled around, and the horn of plenty was overflowing, an avoidable grain waste of about 3½ per cent went unheeded year after year. Sometimes it was more, sometimes less. It went unheeded perhaps because most of it was invisible. To be sure, it was not all wasted. The chickens picked up some, though I may add that the capacity of even a large flock is scarcely ample to salvage much of the loss. The hogs sometimes got a little of it, and the rest helped to feed the wild birds of the air, or rotted to enrich the soil with expensive nitrogen and mineral elements. And then sometimes the great straw stacks, green from the sprouting grain in them, would help to improve the landscape for nature lovers—not deriving their income from agriculture.

Hoover Ordered Action

But while the growing season of 1918 was still young, an army captain who had formerly raised wheat in Oklahoma, and who understood threshing, conceived the idea that these were matters that had a bearing on the success of the war. Avoidable losses of grain, he reasoned, concerned all the people, especially those who agreed that it was more patriotic to eat a corn dodger than to be one.

So the captain—Captain Kenneth D. Hequembourg, U. S. R.—went to see Herbert Hoover about it. Hoover saw the point, and established a Grain Threshing Division as a part of the Food Administration Grain Corporation. He also put Captan Hequembourg at the head of the grain-threshing work, with instructions to get results Here they are—the official reports: In 21 States, approximately 21,903,000 bushels of wheat alone were saved during the season of 1918 by the adoption among farmers and threshermen of improved methods. That includes reduction of waste in both harvesting and threshing. Kansas saved the most, eight million bushels. Iowa was second in estimated savings with two and one-half million bushels of wheat that was saved over and above the average practice. Six other States—North and South Dakota, Oklahoma, Indiana, Nebraska, and Minnesota—each saved between one and two million bushels. The remaining 13 States which reported results saved somewhat less, but the average of the 21 States slightly exceeded a million bushels.

Remember that the wheat saved was not dumped on an ordinary market where the price might have been depressed. All of the wheat saved, when sold, went to market on the basis of the guaranteed price. The same condition applies this year, which makes it advisable for every grower to equal or excel last season's accomplishment. Certain changes, of course, have occurred, including those in our point of view. Last year motives were patriotic to the extent of overshadowing questions of sound farm economics, and we acted as a nation. Now the individual factor is more prominent. So it will be most useful, perhaps, to talk of clean harvesting and threshing methods as they apply to a typical farm.

Here are where the leaks at threshing time occur as they were told me by Captain Hequembourg, following his investigation of the entire problem:

"One and one-half bushels in every hundred are lost because of faulty operation or condition of the threshing machine.

"One bushel in every hundred is lost in wastage around the threshing machine as a result of failure to clean up around the setting.

"Three-fourths bushel in every hundred is commonly lost from failure to provide bundle wagons with grain-tight bottoms."

That makes a total of three and one-fourth bushels, and fully one-fourth bushel more in every hundred raised can be saved by raking the shock rows. The latter is a very conservative figure, for in hundreds of cases thorough raking has yielded a bushel of wheat per acre, equivalent to five per cent on a 20-bushel-per-acre production. But even a total saving of three and one-half bushels in every hundred means 35 bushels per thousand, and at the guaranteed price is an effort well worth while. In going into the harvesting and threshing season this year, however, we must bear in mind the change in public opinion, also the relaxation of pressure along lines of food conservation.

Last season a certain farmer hired two transient laborers to shock his wheat. They finished the job, and he paid them; but after doing so he examined the shocks a found that the work was badly done. he took the men into court, charging the with having committed a wasteful practi under the food-control act. In substar he alleged that the wheat was shocked that it was likely to spoil. He won t case, collecting the money he had pa them as wages, and the men were fined l sides. Whether the verdict would ha been sustained by a higher court is doul ful; in fact, I was informed by counsel the Food Administration that a power public opinion, rather than the literal a plication of the law itself, was responsil for such verdicts. In any event, pub sentiment is not to be relied on too stroi ly. Greater individual effort by gra growers themselves must accomplish t year what the various threshing comm tees, food officials, councils of defense, a similar active organizations helped to tain last year.

Fortunately most of the leading fact in grain-saving are within the control the producer. Here are the things whi he can do, this year and every year, to sa practically all of the grain he grows; ma of the points are well known, but extend observation shows that they are not in ge eral practice:

Let the grain mature as much as pos ble, taking into consideration, of cour labor, machinery, and other facilities handling the crop. Unripe grain is di cult to thresh clean either from the shc or from the stack.

Provide tight bottoms for the bun wagons, using for the purpose wood, ca vas, heavy cloth—in fact, almost any n terial of substantial nature that will sa the grain which shatters from the bundl

Make test rakings of the stubble fiel especially the shock rows, and from th rakings judge whether enough grain can recovered to justify the labor. Nearly ways it pays to rake the shock rows, usi a horse rake for the purpose. Raking t entire field is a matter to be judged fr the evidence of test rakings.

Feed bundles into the threshing machi heads first—always—and only as fast the machine will handle them with choking. Overfeeding the threshing n chine is perhaps the greatest single cai of wasteful threshing not due to mechani fault of the outfit.

For the reason just given, the choice men to pitch bundles often means the s ing or loss of many bushels of grain. typical personal experience in Wisconsi few years ago illustrates this point. It v a hot day in August, and we were threshi barley—bearded barley. I remember th beards as the biggest I ever saw outside specially prepared exhibits. And for sha ness and creeping qualities those bea were second to none. A strong wind v blowing. It was not quite a windstor yet was stronger than the average gale. came steadily most of the time, but a occasionally in gusts that started lit whirlwinds of dust, chaff, straw, and bar beards.

The crew was in bad humor, especia those pitching to the machine, and also t man on the straw stack. There was a g eral swapping of places—in fact it was i possible to work on the lee side of the s feeder without developing bloodshot e in half an hour. It was not an envia post, pitching barley bundles against t wind.

An Expensive "Husky"

But finally the neighborhood "husk who had been working up a good sw carrying grain to the granary, pulled so goggles from his pocket, put them on, a offered to pitch to the machine against t wind. He became the hero of the da Nor did his popularity among the cr wane when at well-timed intervals he wou toss several bundles together into the m chine and quickly follow them with mo The machine would hesitate, slow dow and then stop.

There followed a general visit to t pump, a trip to the orchard, a rest in t shade—in fact, a considerable recess bef the machine was cleaned out and ready go again. And so innocently, apparen so accidentally, [CONTINUED ON PAGE



The large pile indicates the wastage found while threshing 2½ bushels. The small pile shows the wastage after the machine had been adjusted

Do You Hate to "Fiddle" with "Trifles"?

SOMEWHERE in one of his very human documents, "Alfalfa Joe" Wing says that the man who disdains to save anything less than $5 will never be rich. He meant that a start toward a fortune is accumulated in small amounts by hard work. Apply the same thought to your threshing yield. The man who disdains to see that his crop is threshed clean, loses from three to five bushels out of every hundred bushels. And this, on a large crop, with wheat at $2.26 a bushel, means the loss of several hundred dollars to *you*, if you're not careful. It really does pay to watch trifles and details. THE EDITOR.



The canvas or blanket is spread near the straw pile, and receives all the straw while the machine is threshing 2½ bushels

There is Millions of Waste in Our Produce Packages

By James H. Collins

THIS season's orange crop from California will take 22,000,000 wooden boxes, costing $5,000,000. And Marketing Expert Merrick declared in Boston recently that this meant an expense to the consumer of one to two cents on each dozen oranges.

Vegetable packages cost even more. The Norfolk district in Virginia ships nearly 4,000,000 packages of truck yearly, containing spinach, kale, cabbage, potatoes and the like, in barrels, baskets, and crates, costing $7,000,000 to $8,000,000 for packages alone. This figures out about one cent for packages on each head of lettuce bought by the consumer, one to three cents per head for cabbage and cauliflower, three to five cents per half peck for spinach, beans and peas, four to nine cents on each basket of fruit, two cents on each box of berries.

These are "gift" packages which are not returned to the grower, and Mr. Merrick maintains that we must find some kind of fruit and produce package that can be shipped back to the farm and used over and over again, like the milk bottle, the ice-cream tub, the egg crate, and the bread hamper.

The "gift" package was originated in the days of reasonable labor wages and plentiful lumber. It cost a few cents then, and was so cheap, and also so attractive as a display package for fancy produce, that farmers could afford to use it by the millions, and consumers were not greatly burdened by the expense. But to-day these packages cost three times as much as they did five years ago, and millions of dollars may be saved by substituting containers that can be used again and again.

It is not an easy problem, however. Mr. Merrick believes that produce might be shipped in metal packages, built with a paper to be nested for return to the farm or in collapsible or knock-down forms.

The metal package is theft-proof, moisture-proof, and rat-proof, he points out, and might make hundreds of trips to market. But when metal barrels were tried for apples some years ago, shippers found, alas, that they were not frost-proof like the wooden barrel—and this illustrates some of the difficulties which might arise.

Distance is also a big factor in the problem. Wherever fruit and produce are hauled from near-by farms to city markets you will find durable return packages, like the Boston market box. But where fruits and vegetables are shipped thousands of miles, as the California and Florida citrus, the Southern berries and winter vegetables, and the Northwestern red apples, returning packages becomes a big job.

It does not always pay to use a second-hand package, shippers of live poultry have found, when second-hand chicken coops collapsed, killing and crippling birds, and eggs were damaged in weakened second-hand crates.

There is the valuable factor of attractive display embodied in the "gift" package, for the orange and apple boxes, the peach hamper, and the veneer half-barrel were all designed to make farm stuff appeal to the buyer's eye when it arrived at the market, and these containers have been standardized largely with display values in view.

A big job!

To ship California oranges alone, the growers in that State own a big co-operative lumber and box plant. Thousands of acres of forest are cut down every year to make fruit boxes, potato barrels, veneer hampers, butter tubs, and berry crates. Most of them are burned for kindling wood after being used once. It is a mighty expensive kindling. If we can substitute returnable packages we will save millions of dollars and reduce the cost of shipping, marketing—and living.

Collins is a pretty sound man, and usually knows what he is talking about. Maybe he has given us a tip here that could be used as a basis to work out a reform that would save money for you personally. We don't like to print anything in this magazine of yours unless it can be made to do you a personal service of one kind or another.

We believe that if every grower and trucker, and everyone else in the farming business who uses crates or boxes or cases, would write to his state department of agriculture and ask to know what has been done by the States and National Department of Agriculture toward the standardization of crates, and also demand that, if nothing has been done, the question receive immediate attention, there would be some worth-while developments.

Then, again, it's just possible that there have been standardization methods worked out by your state authorities which you can learn of in this way and take advantage of immediately. THE EDITOR.

Something You Can Do for the Boys Who Are Coming Home

A MAN from the War Department came to us the other day and said: "Thousands of boys who went over to help win the war are coming home now and having a hard time finding jobs. We have figured out a way in which every householder in the country can help them, and wondered if you would spread the word among your 650,000 readers." The plan is this:

During the war we didn't buy any new things we could possibly get along without. We patched up the old things and made them do. We didn't paint the house. We didn't repair the outbuildings. We got along with the clothes we had.

Now the war is over—and we are victors. We ought to *look* like victors.

If 100,000 homes throughout the country, including *yours*, would start to spruce up, they would create countless bits of business that in the aggregate would *supply work for thousands of returned soldiers.*

As for the practical value of this move, remember that property of yours which has been neglected will cost much more for repairs a little later, because it is getting worse all the time.

We don't know whether prices are coming down or not. Even if they do, will the decline be sufficient to make up for the additional cost of repairs due to delay? In other words, if it costs $300 to fix up your place to-day and you wait six months to get it done for $200, isn't it possible that the additional repairing necessary on account of the delay might eat up that saving on cost? Why not do it now?

GEORGE MARTIN, EDITOR.

Farm Children's Co-operative Market That Succeeded

By S. R. Winters

IT IS thanks to Walter D. Barbee, principal of Seaboard State High School of Northampton County, North Carolina, that a practical money-making plan of marketing small farm products was introduced among the pupils. The beauty of it is that it not only makes money for the youngsters, but it also teaches them practical business methods that they can carry on into their grown-up farming affairs. The idea is so simple, possibly you could use it in your school.

Barbee started with eggs. Instead of Mary bringing her little lamb to school, or Johnny bringing his dog or cat, the pupils of this Tarheel community bring fresh eggs each morning. The products are then tested by a home-made egg tester, graded according to freshness and quality, neatly packed, and shipped to Norfolk, a Virginia city only sixty miles away. A morning and evening express service between Seaboard, North Carolina, and Norfolk affords a profitable marketing outlet.

The idea was originated by Barbee for this rural school of 150 pupils, two years ago, when the topic of needed improvements in the schoolhouse was uppermost. The pupils were invited to bring some hens, roosters, and biddies for a diminutive poultry show.

"We did lots of things that we wanted done without calling upon the school board for any money," said Mr. Barbee. "Since that time I have had other shows of live-stock products, and if I were to tell you the total amount of money realized you would begin to doubt the entire business. Suffice it to say, our school is equipped with nearly all modern apparatus, and we are now working on the furnishings of a newly built dormitory."

Subsequently the Seaboard Community Club has been organized, with a president, vice president, business manager, and director as officers. The principal of the school is director of the club. The poultry club is altogether successful. Club members collect from their homes only eggs laid the day before; individual record sheets are maintained by the school, indicating exactly what each student markets day by day. Settlement is made monthly, and a neat bank account is credited to each pupil. Monthly meetings are conducted by the poultry department, at which time chicken problems are discussed. For example, if one member has marketed continuously a superior product, the causes and results are carefully diagnosed.



Walter D. Barbee

Eggs are marketed according to three standards. Those perfect in shape, form, color, and size are sold for hatching purposes. According to this classification the pupils receive from $2 to $3 per setting of 15 eggs—a very fair price.

"Of course, we do not sell so very many in this way," said Principal Barbee. "But the future for us is very bright along this line. We will have to build up our reputation. My club members will do this too, for I am daily ordering the very best eggs to improve our good stocks. We will not be content until we have the highest efficiency in egg-producing strain.

"The second way to sell our goods—and we do it all co-operatively—is to place them directly in a neat little crate especially designed for our club, with appropriate label, to the large consumers, such as hospitals, drug stores, and hotels. They, of course, must have fresh eggs, and they soon learn that our guarantee is made good.

"A trial with our goods always brings to us another customer. We never lose one. We have never had an egg 'black-eyed.' Then, of course, the third way of marketing the eggs is to sell direct to the commission merchants. The children bring the eggs to school each morning and the business manager credits the pupils with the number of eggs delivered. They are carefully graded, tested, and crated. We send them to the merchants in crates of 30 dozen. At the end of each month a settlement with each child is made, and he is given his check after deducting all charges and commissions. Our prices will average, as a rule, from four to six cents above local prices. This, of course, is the price per dozen, and amounts to a great deal when you consider a shipment of sometimes as much as 100 dozen a week.

"It is useless to say that the children are interested in the work. They are simply wild over the project. It eliminates tardiness at school, and usually the boy or girl most thrifty along these lines is the one that leads the classes, and the one that has the largest number of war savings stamps. The co-operative adventure teaches the children business methods, arithmetic, letter-writing, and numerous other things that it is always very hard to teach in a more practical way. The lesson of co-operation and friendly rivalry is also an object achieved. Another advantage to the credit of the community is the fact that an improved grade of live stock is being perpetuated. All club members use the same breed of chickens, so that the eggs will be uniform and will mean very little grading. In other words, we try to let the hens do as much of the work as possible.

"We place pure-bred pigs, sheep, calves, and all kinds of selected seeds. Our girls in summer can do gardening, and sell the products in the fall and winter. We have a community fair, and all of the best products are exhibited. The club has its original, beautifully decorated stationery, and none but club members are entitled to use it. Everything is done to interest the kids and develop a spirit of helpfulness among the coming citizens of the community. The older people take a great deal of interest in the club members, and they also profit thereby."

So, instead of teaching the boys and girls to leave the quiet and industry of the farm for the noise and rush of the city, the Seaboard State High School is answering in a practical and effective way the common indictment, "The fundamental difficulty with agricultural conditions is that there is no attempt to instruct the children in matters which will awaken an interest in country life."

"Much bothered with tramps out your way?"

"I was until I tacked up a sign on my front gate."

"Ah, 'Beware of the dog,' I suppose?"

"Oh, no. Simply, 'Farm help wanted!'"

—*Boston Transcript*

Profits for You in Direct Marketing if You Work It Right

By T. C. Hart

WE ASKED Mr. Hart to tell you something about himself, and this is what he wrote:

"I worked for eight years for the Employers' Association of Chicago, and the Employers' Teaming Company. As a kid I worked on farms, and after leaving Chicago I went south to Mobile County, Alabama, and was one of the pioneers in the Gulf Coast country in the setting out of Satsuma orange groves.

"I had charge of several groves as well as my own, and was for some time superintendent of the Growers' Association. It was down there that I gained my experience in the marketing game in trying to open up paying markets for myself and others.

"I have given a great deal of thought and study to the problem of marketing, which to me is one of the most vital questions there is for the farmer and fruit grower.

"Five years ago I was given up to die of heart trouble, but I fooled them all, and lived. I have traveled a good deal, still retain my interests in the South, and wherever I have gone I have always made a study of the problems of my fellow farmers, so I feel that perhaps I am fitted to say these few words on marketing."

NOTE: Of course it would be fine, and it would wipe out the middleman, if every community could supply itself with its own foods, thus eliminating transportation and other charges that send prices skyward. But in the very nature of things, home marketing of home products can only be carried so far. Still, if producer and consumer understood each other and marketing facilities were provided among them, millions of dollars could be added to the pockets of both farmers and consumers every year.

THE EDITOR.

A FEW years ago on a farm of mine in southern Alabama I had over 1,200 bushels of sweet potatoes "banked" and waiting for a decent market price.

Relatives of mine up in Illinois were paying five and six cents a pound for sweet potatoes at the markets. I was offered by some Southern commission men 30 cents a bushel for my crop, which I refused. That 30 cents a bushel represented a price of about one-half cent a pound. In the Northern markets these potatoes were bringing five and six cents a pound, and the grade of produce was inferior to that for which I was offered the one-half cent a pound.

Why the big difference in the price offered to me, the producer, and that charged by the retailer?

It's the old, old story of the middleman and his various profits on produce for which the producer gets next to nothing, and for which the ultimate consumer pays a fancy price.

That problem is an old one, and still it's a problem with which the producer has to deal constantly in all sections of the country and with all manner of crops.

They are making more money than the producer, and they are making the consuming public pay the freight. My experience has been that the matter of getting a direct connection between producer and consumer is one of education. Education of both consumer and producer.

They have got to be made to understand each other better, and to know and respect each other's likes and dislikes. The consumer has got to be educated to trade with the producer when he has the opportunity.

In many places there have been public markets established where the farmers bring their produce and sell direct to the consumer.

The consumer may go to these markets and get his produce fresh from the farmer and at a much lower price. By this sort of marketing the commission man and the consumer are left out, and the consumer saves a good bit, and the farmer gets a better price than he possibly could by selling to the commission men.

The fact that they have failed is proof that something is lacking somewhere, and my experience has been that they failed because of a lack of education as to their possible benefits.

The people were not enough acquainted with what the markets offered them, and the farmers were not well enough acquainted with the needs of the people, or were more or less indifferent as to the possibilities which such a market held out to them.

In South Chicago is a huge public market erected at an expense of thousands and thousands of dollars, which as a market has proved an abject failure. The people were never educated as to what this market could mean to them, and the farmers and truck growers were not made acquainted sufficiently with the proposition, so the result has been that a huge market which should mean a saving of hundreds of thousands of dollars each year to the consuming public, and should also mean an added income of hundreds of thousands of dollars to the farmers, stands almost a total loss. Somebody started to do something, but hardly knew what, and the thing that should have been a great success was turned into a farce, and a profit only to the contractors who built it.

Out in Salt Lake City the clamor from the farmers for a public market was met by the city administration with the offer to the farmers to use the courthouse square as a public market. And backed up to the curb around the square each morning were lines of farmers' wagons with produce and fruit fresh from the farms displayed in tempting array and in neat, attractive packages. But as a market it was a failure. There would be dozens of loaded wagons and only a very, very few buyers for the produce.

I have seen those poor farmers starting home about noon with nearly all their load of fresh produce still on the wagon—taking it home to feed to the stock or to be dumped out to spoil. And then, leaving the square, I have walked a few blocks to the center of the city where the wholesale and retail dealers are located, and have seen people buying wilted vegetables and fruit several days old for about twice the price they would have paid for fresh home-grown produce from the farmers' wagons at the square.

Something was wrong again and once more it seemed to be a matter of education.

The farmers took to the plan for a public market with hope in their hearts. They thought they saw a chance to dispose of their produce at a reasonable price and still make a living profit. But when they got to the market, the flood of buyers they expected did not materialize.

The consuming public had not been educated up to the advantages which this roadside market held for them. The daily papers had contained some publicity on the subject, but there had been no concerted campaign to educate the consuming public to the advantages of buying from the producer.

Some thrifty housewives made daily trips to the public market. Most of the buyers seemed to be housewives from the homes of working men, the laboring classes, or hosts of nomadic workmen who made the benches in the square their hotel while passing through the city.

And I have seen many other like attempts to bring producer and consumer together and most of them have resulted in more or less of a failure. And in every case where the plan has failed there seems to be a lack of understanding between the buyer and the producer.

To go back to my 1,200 bushels of swe potatoes, banked and waiting for a pri that would at least pay the cost of raisir the crop. I resolved that I would not se to the local commission men. I starte out on a still hunt for a market of my ow

I had heard of a man in Chicago wh had started a public market down in th stockyards district. His idea was to sell the people of that district at the actu cost of getting and handling the produce. wrote him a letter, and asked what h would give me for a carload of swe potatoes. I told him I was willing to se at a low price. He wrote back offering m 40 cents a bushel of 60 pounds, f. o. b. m shipping point. He said he wanted to se the potatoes out to his customers at 1 cents a pound—the market price at th time was about five cents a pound. Th freight would cost him about 25 cents bushel, so that at 1½ cents a pound, 90 cents a bushel, he would pay me th 40 cents, pay the freight, and still hav plenty of margin left for handling charge

I accepted his offer and shipped him carload of the potatoes.

It had cost me about 20 cents a bush to raise those potatoes and load them o the car. That 20 cents included see fertilizer, labor of all kinds, and the diggir and handling of them. At 40 cents a bush it meant a net profit of 20 cents a bushe and as my yield was about 150 bushels a acre, I thought I'd done pretty wel considering I had already taken a crop snap beans and early Irish potatoes o the same land early in the summer.

But what pleased me more than an thing was the fact that I had got ahead the local commission men. I had made break for a direct producer-to-consum market, and it had been a winner. got 10 cents a bushel more than th commission men had offered me. M potatoes had been sold to the consum for about one-fourth what they woul have cost them in the retail markets, an no middleman had had his hand in the p at any stage of the game.

I felt greatly encouraged by this strok of business, and I resolved to try to use as an opening wedge in a wider campaig for dealings between the producer an consumer.

The variety of potato which I raise was known as the "Yam." It is a darke more juicy potato than the Jersey, and my notion a much better quality. I a borne out in this opinion by 99 per ce of the people to whom I have talked wh have eaten both the Yam and the Jersey

But the Yam was comparatively a unknown quantity outside of the Soutl and I found that to sell a Northern con mission man a consignment of Yams w next thing to an impossibility. The con mission men said that the public didn know what they were and wouldn buy them. I found out that the commi sion men had an aversion to introducir anything new. If there was any educatir of the public to be done, the commissic man wasn't the fellow for the job. Th educational work had got to be done by th producer who had the commodity to sell.

I went to Chicago to see if I couldn find an outlet for some more of our Al bama Yams. I haunted South Wat Street—one of the greatest produce ce ters in the world—and I talked Yam ti my head ached. One of the biggest con mission men on the street admitted th as an article of diet the Yam had it all ov the Jersey sweet. "But," he said, "th public doesn't know it. The Yam won sell in competition with the Jersey."

But before I left him this South Wat Street man gave me a valuable tip. H said: "Your Yam is all right, but the fe lows down your way haven't learned pack your stuff so that it compares wit the Jersey. If you're going into a campaig to educate the public to use your Yar first educate your growers to pack the stuff so that it will make a favorab comparison with the produce with whic you expect to compete. Look here And he took me into a large storeroom ar showed me the neat barrel and hamp packs of Jersey sweet potatoes. Then I went on:

[CONTINUED ON PAGE 1

Why You Don't Like Pink Buggies and Green Horses

IF YOU saw a man driving down the road with a pink buggy and a bright green horse you would think that either he was crazy or you were seeing things. But that would be because you were not *used* to pink buggies and green horses. We have pink and green and blue automobiles, and think nothing of them, don't we? That's because we *are* used to them.

Apply the same thought to the housewife going to market. She sees something packed a little differently, or grown a little differently, than she is used to seeing it, and she doesn't buy it, though it may be better than what she has been getting.

Go a step further and apply the same thought to a public market. People buy food where they are *used* to buying it. If a co-operative farmers' market is started down the street a block, the consumer has got to be educated to the advantages of trading there. Many a market has failed where it deserved to succeed, because the public didn't appreciate it. It wasn't *used* to it.



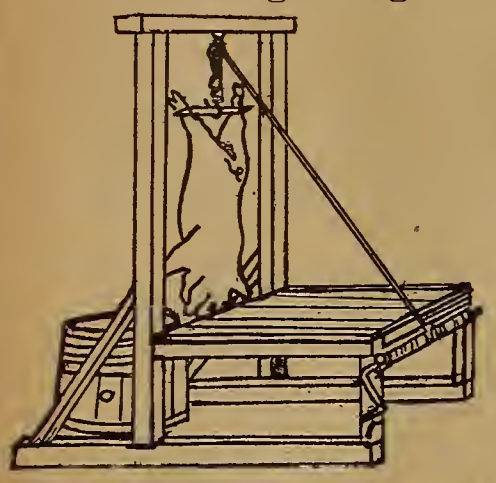
Hart in working togs

The human being is strongly a creature of habit. It is hard to jolt him out of his rut. In this article Mr. Hart suggests a way we can educate the public to appreciate the co-operative market for home products, to the cash benefit of every one of us.

THE EDITOR.

Home-Made Time and Labor Savers You Can Use on Your Farm

A Good Hog Hanger



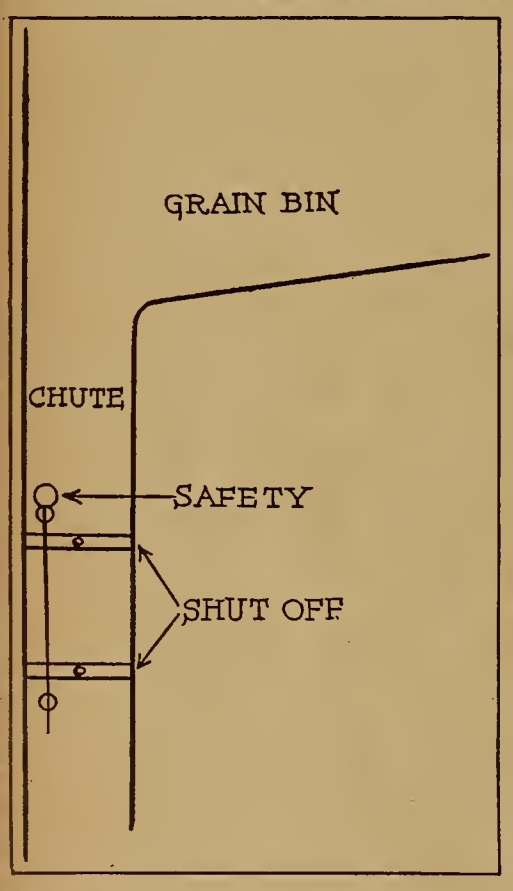
THIS will save an immense amount of heavy lifting—in fact, it is a great improvement over the usual way used in hanging hogs. Place the barrel just in front, and lift the hog in and out easily and quickly with a few turns of the windlass—a small child can do this easily. It is easier to handle a 500-pound hog this way than a 50-pound hog by the old method. After being scalded, the hog can be swung up and the entrails removed without lifting. Turn the hog down on the table made to the back of frame and cut meat right there. Make foundation of 4x6-inch timber, 10 feet long; uprights of 4x4-inch, 11 feet long; crosspiece at top of 4x4-inch, 8 feet long; braces and table legs of 2x4-inch, and table of one-inch plank. Make windlass of round pole about two inches in diameter, and fasten by an iron cuff to the table legs so as to give your rope room to turn. It's a simple device and will last a lifetime for hog and beef killing, and it costs less than $5.

G. A. TIBBANS, Burdick, Ind.

A Handy Grain Bin

Second Prize

A GREAT many farmers have barns with the grain bin above the ground. This seems to be the handiest place to put it when making the barn, but it is very unhandy when it comes to feeding the stock. No matter how small an amount of



grain is wanted, a trip is made to the loft for it, and it means time and labor wasted.

The accompanying drawing will show a simple way to save this time and labor. The hole in the floor of the bin should be about one foot square. The runway, made of two-inch lumber, will then have an opening of 10 inches square. The runway should be covered with tin at places where mice and rats can get to it. Near the bottom two flat pieces of wood work in and out of the runway, on the same order as a common drawer. These are about one foot apart. When using two of these blocks of wood no grain is lost, for, when shutting it off, the top one is closed first and the bottom one will then stop what small amount gets by the first.

These openings can be fastened so they cannot be jarred open. Two rings are put on the runway, one above the other, below the two openings, through which a stick is put, it being large enough at the top so as not to slip clear through.

Did you ever look for a small tool half an hour or more before you found it?

Here is a way to avoid such waste of time: First get some stout cloth or canvas and tear in strips. Tack a strip on the wall by each end, making a loop to hold the tool. Then paint the name of the tool above. Fasten a piece of cardboard, with pencil attached, above it. Upon this, anyone who removes the tool indicates where he has taken it. If he forgets to put it back the record shows where it is most likely to be found.

P. T. DUNN, Chandler, Mo.

A Home-Made Bean Thresher

First Prize



IN DOING farm work and the small tasks that go with it, it is sometimes possible to make one tool do the work of two. But such small jobs sometimes come when least looked for, and, however small, they often require a lot of hard labor.

Last year we had out an acre of beans, but on account of the dry weather the entire amount when harvested did not make up a load. Threshers detest small jobs which do not pay them, and the inconvenience caused by the weather left the beans on our hands. We started to thresh them by hand, but finally worked out an idea which was very practical.

A manure spreader was standing on the barn floor, so after we had given it a sufficient cleaning we filled it with the bean straw, took off the left driver and the clutch on the "beater" shaft, replaced it with an eight-inch pulley, and hitched on a 1½ horse-power engine. It must be taken into consideration that the beater must turn the reverse from which it does ordinarily. The apron forms the self-feeder, and the teeth of the beater is the only thing that comes in contact with the seed. We fed as slowly as possible in order not to choke the beater, and kept the spreader filled to capacity. We afterward picked up the straw and shook out the seed, and after running it through a fanning mill had the work done as well as if we had used a threshing machine.

It saved us time and money by utilizing our spreader as a home-made bean thresher.

BERT BROWER, Hamilton, Mich.

A Home-made Liquid Manure Barrel

IT PAYS to have a well-arranged manure barrel handy to the garden.

Take a large barrel and give it a coat of paint inside and out. Fix a faucet on the side, one or two inches from the bottom.

Place clean straw in the bottom, sufficient to come above the end of the faucet. Place barrel on solid box or other foundation, putting three bricks under the edge of the barrel to keep it off the box and allow air to circulate beneath. Without this precaution the bottom will soon rot out.

The box should be high enough to allow a pail or watering pot to be placed under the spigot. Fill the barrel with clean manure—that is, free from straw and bedding, and fill to the top with water.

If in using the liquid from the barrel the precaution is taken to bring the watering pot to the barrel full of water and emptying it, and then drawing out a corresponding amount of liquid, the barrel will always be full and ready for use.

When the liquid has grown too weak to be of much use, draw off all the water and empty the barrel, putting the manure on the asparagus bed, or the shrubs.

L. B. KILMER, Burdick, Ind.

How to Fool Old Dobbin

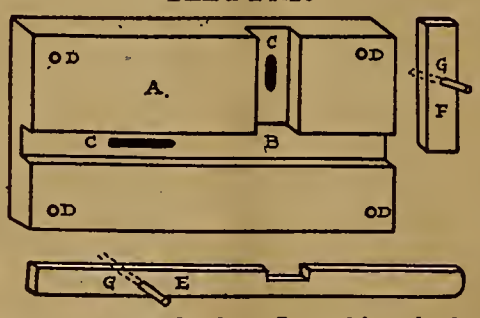
Third Prize

A—Block of wood (poplar preferred) 8 in. wide by 10 in. long and 1¼ in. thick.

B—Grooves 1½ in. wide and ⅝ in. thick.

C—Slotted holes 2 in. long by ½ in. in diameter.

D—Holes ¼ in. to bolt to crib or barn door.



E—Slide made of tough hickory or oak, 12 in. long, 1⅜ in. wide, ½ in. thick.

F—Catch 5 in. long, 1⅜ in. wide, and ½ in. thick, also made of hickory.

G—Hickory pins long enough to go through both lock and door, ½ in. in diameter.

WHILE reading your most valued paper I saw that you were offering prizes for handy farm devices. Here is a sketch and directions for making a barn or crib door lock. I consider it valuable around the farm, especially where you have horses that have the habit of opening doors.

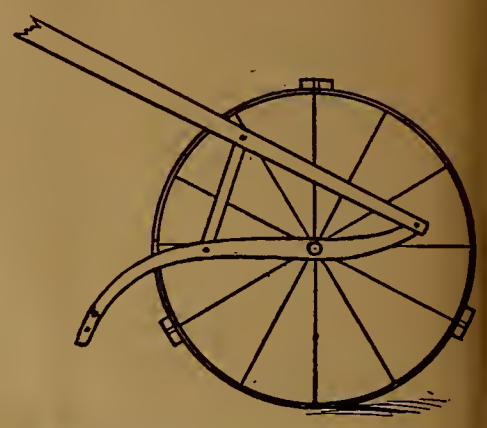
This lock fools them, as the top catch must be lifted before the slide will come back and unfasten the door.

They are inexpensive, and can be made during odd times. I would not give one of these locks for any I know of on the market to-day. They are almost indestructible, and will last for years.

In making the lock see that the grooves are cut smoothly as well as the slides, so that all moving parts will not bind. Place the lock on door with grooves next to door, using four ¼-inch bolts to fasten to door. Cut a slot in door panel for slide to catch in, two inches wide and two inches deep. Notice if you are going to make a right or left lock, as they are not reversible. The catch must always be placed at top of lock so it can fall into place by its own weight. Cut slots (C) in door also so that the lock can be opened from either side, and old Dobbin can't manipulate it.

E. O. MCCONNELL, Magnolia, Ind.

A Good Distance Marker



THIS may not be an original device, but it is original with me.

In setting out plants from the frames I use my garden plow to make the furrows. Removing the plowshare, I fasten small wooden blocks to the wheel rim and mark the distances between plants. (Note illustration.)

The circumference of the wheel is 78 inches, so I use two blocks for tomato plants, placing them a trifle over three feet apart. Three blocks for late cabbage or cauliflower at 26 inches; and four blocks for early cabbage at 19 inches.

The flat rim of the wheel makes a smooth line, and the indentations of the blocks are quite visible. A small groove cut in the block makes it easier to fasten on with wire or cord. I use the latter, and fasten on each side of wheel spoke.

I have always had great difficulty in spacing my plants, and this obviates the necessity of carrying a stick or rule.

MRS. ANDREW ROESSLER, Harrison, O.

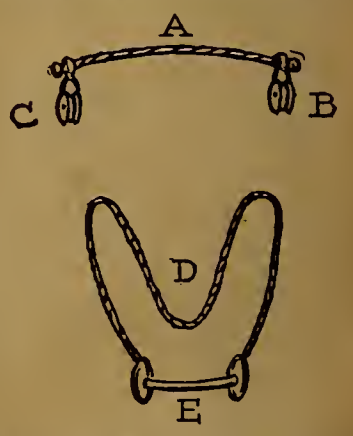
Runaway-Horse Control

HERE is a device that beats anything I know of to control horses that are wild or in the habit of running away. I have thoroughly tried it, and it works like a charm, without harming the horse. Noting the illustration, this is what you need:

A—¼-inch rope 12 inches long. C and B—Small pulleys tied to end of rope A. D—¼-in. cord rope four feet long. Common bridle bit.

Place on the horse as follows:

Put 12-inch rope (A) over neck of horse six inches back of ears. Fasten to top of bridle by a 12-inch strap. Pulleys should come on each side of neck about three or four inches from top. Then take rope and pass it under neck of horse as shown in

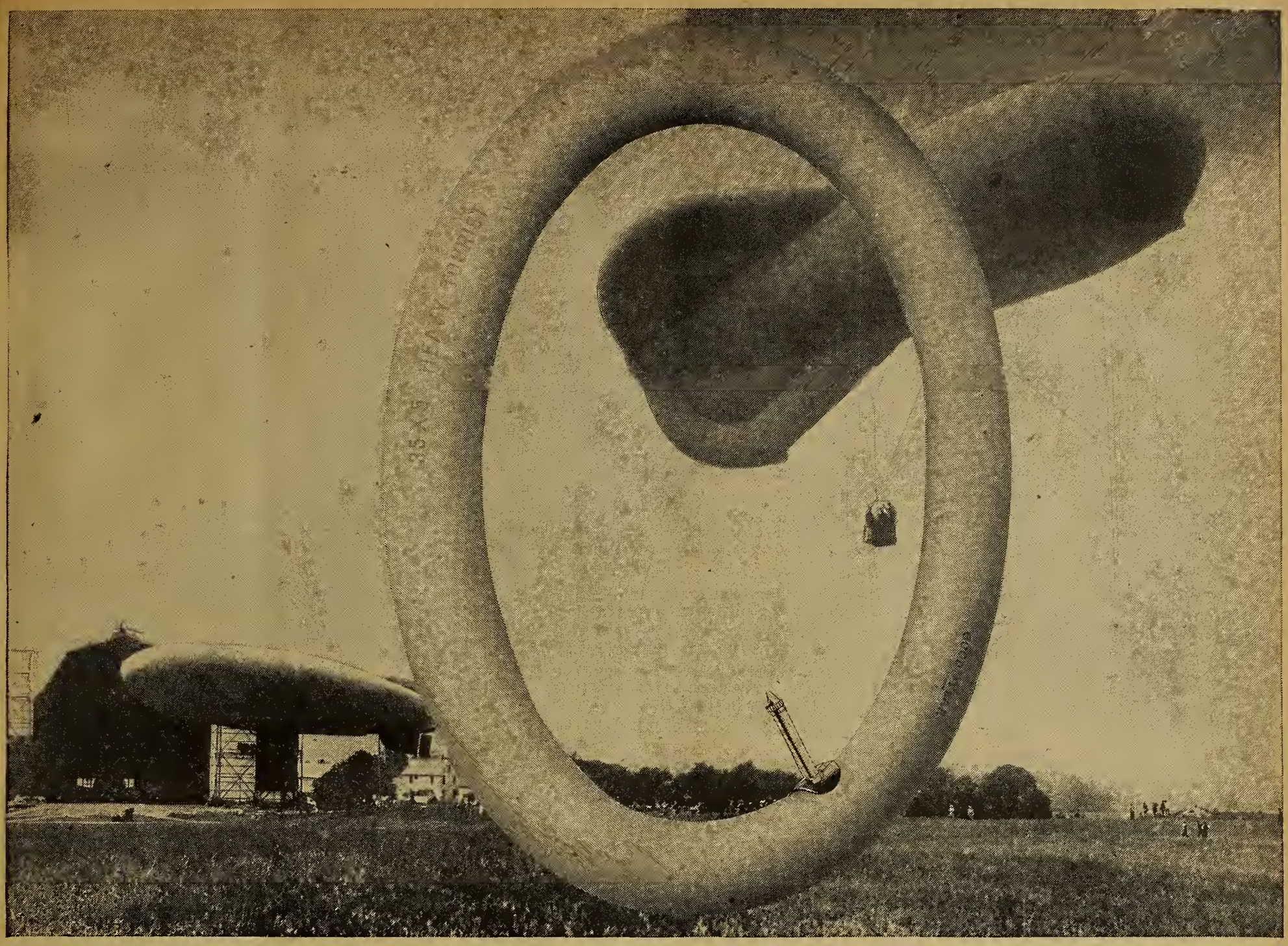


second figure. Pass ends of rope (D) through pulleys (B and C), each end on one side of horse's head, then down through bridle bit ring, and fasten on line of each horse. For two horses use two of these. Hitch up the team, and if they try to run, pull back on the lines with a steady pressure. This makes the rope draw tight under the horse's throat and shuts off his wind. When the horse stops slacken up on the lines and let him have air.

FRED ENGELKEIMER, Nehawka, Neb.

NOTE: Several hundred readers submitted time and labor saving plans in use on their farms. A few of them appear above, and others will be published in succeeding issues of Farm and Fireside. In addition to the money given for first and second prizes, $3 will be paid for all others published.

THE EDITOR.



Built-Up *Layer-Upon-Layer*

JUST how important is the *layer-upon-layer* construction which Goodyear employs in the manufacture of tubes?

Does it make them stronger—longer-lived—better containers of air?

Well, for nine years we have been building balloons and dirigibles, in the construction of which our first and most complex problem was that of inflation. For gas is volatile, much more elusive than air, harder to capture and hold.

It was finally demonstrated, however, that rubberized fabrics, built up *layer-upon-layer*, formed the most practical container for this gas.

Once this fact was established, it seemed quite logical that the same principle should prove even more successful when applied to tubes. For a tube's sole function is to hold air.

We thus evolved the Goodyear Heavy Tourist Tube, making it of pure gum strips, building them up, *layer-upon-layer*, then curing them together, after which the valve-patch was vulcanized in.

The soundness of this method was immediately established.

The thin layers of rubber cured one upon the other, enabled the elimination of all defects, such as sand holes and porousness. This construction also gave the body of the tube a criss-cross grain which prevented splitting if punctured. Finally, by vulcanizing the valve-patch securely into the tube we prevented all leaks at this source.

There is an observable tendency among motorists everywhere to use Goodyear Heavy Tourist Tubes exclusively.

They have learned that the slightly added cost of these thick, grey tubes is more than justified by their longer life and by the protection which they undeniably give to casings.

More Goodyear Tubes are used than any other kind.

THE GOODYEAR TIRE & RUBBER COMPANY, AKRON, OHIO

GOODYEAR

AKRON

Is There Anything for You in the Non-Partisan League Movement?

PERHAPS you are wondering if there really is anything of importance to *you* in the Non-Partisan League of North Dakota.

You want to know whether it is sound in its organization, aims and objects.

It seems to us that there are some good things about the Non-Partisan movement, and some bad. Whether it survives and grows depends on whether the good things predominate.

Apply this thought to your own life: You have good impulses and you have bad impulses. If you let your bad impulses control you, you become a bad man; if you cling to your good impulses, you become a good man.

This league is supposed to represent the protest of the farmers of North Dakota against the unfair and dishonest treatment accorded them by the men who owned the railroads which hauled their farm products to market, and the men who bought those products in the markets.

Farmers Believed North Dakota Laws Inadequate

The farmers believed the railroads discriminated against them in the matter of rates, and that the purchasers of their products did not give them fair prices. Farmers, like everyone else, are justified in protesting against unfairness and dishonesty. They are likewise justified in taking steps to stop them.

The farmers believed the laws of North Dakota did not adequately protect their property interests, and did not provide the machinery whereby they could get justice.

If these and similar abuses exist against *you* as a farmer in *your* State, you and your fellows would be justified in taking steps to change those conditions.

Undoubtedly the conditions ought to be changed, and in so far as the Non-Partisan League truly represents the sincere protest of real farmers against genuinely bad conditions we say it is a good thing. That is only common sense, and has nothing to do with the merits of the league itself.

The question now arises as to whether the Non-Partisan League constitutes the right machinery for the farmers of North Dakota to employ in redressing their wrongs. Maybe it is and maybe it isn't. It is too early in the history of the league for anyone to say. Opinion even in North Dakota seems to be about equally divided on that score.

In searching for the clearest opinion on both sides of the question we have settled upon two as nearly disinterested statements as are available. The opposing view is that of Mr. David Lawrence in the New York "Evening Post." The favorable view is that of Mr. William MacDonald of "The Nation." Both statements were written after personal investigation. Says Mr. Lawrence:

"I talked with several men in Minneapolis and St. Paul who bitterly denounced the Non-Partisan League, who told me all they felt and believed, sincere men who think the experiment is destined to ruin, and who say that even now it is torn by internal strife. I talked also with men who said they were favorable to many of the things advocated by the Non-Partisan League, but condemned its methods. I talked, finally, with Arthur C. Townley, head of the Non-Partisan League, and asked him to state his side of the controversy.

Three Impressions of the Non-Partisan League

"There seem to be three impressions of the Non-Partisan League," I told him at the outset: "(1) that it is Bolshevism; (2) that it is a movement to get something for the good of the farmers of the State of North Dakota, and is opposed and persecuted by the business interests adversely affected by its growth, and (3) that it is a species of socialism. What would you yourself say of it?

"'I call it a movement toward public ownership,' said Mr. Townley. 'We have elected a state legislature and a governor by a majority of the votes of the people of North Dakota. We believe in the rule of the majority. That's sound Americanism, isn't it? The Bolsheviki do not understand it, do not believe in the will of the majority. We are by no means Bolsheviki.

"'We believe in government ownership of railroads and utilities. Cities own utilities, why shouldn't States? We believe the State should help people build homes, should loan them money through a central bank, should operate everything for the common good.'

"I told Mr. Townley that many concerns were helping their employees build homes and were even making loans to them.

"'To the extent that business does these things,' he replied, 'will the necessity for a non-partisan league disappear. They called many of these things socialism years ago, but the Government operated the railroads during the war, and the telegraphs and the telephones.'

"I suggested to Mr. Townley that the objection was not to the nomenclature of these things, but their operation. The public wanted efficiency, and would choose according as it believed the Government or private owners would do the job better, and I inquired what incentive there would be for men of executive ability who have the 'know how' to get into railroads or utilities if the highest salary they could get was about $5,000 a year.

"'Well,' said Mr. Townley, 'there's no question that state and government salaries, for that matter, are too low. But, whether the salaries of officials might be fixed, there is no objection to hiring experts at higher sums. In North Dakota our highest official gets $5,000, but in the operation of our state bank, for instance, we shall probably have to pay more to get experts.'

"There is no doubt that Townley wouldn't have got very far if the powers that be had believed in a state-owned elevator, and if some time ago a curbing power had been exercised against those who were asking exorbitant interest for loans to farmers. The railroads and the manipulation of freight rates didn't help to keep down Townley.

"The big question is whether the opponents will fight to the last ditch or begin to recognize the merit of those things which ought to be remedied. Now appears to be the opportunity, for there is a revolt in the ranks of the Non-Partisan League itself, with the attorney-general, state treasurer, secretary of state, and state auditor aligned against Townley, who is called too dictatorial and autocratic.

"Also, the Blue Sky Law Commission of North Dakota, composed of the governor, the secretary of state, and attorney-general, has forbidden the further sale of stock or the establishment of any more Non-Partisan League stores until an accounting is rendered and changes made in the form of contracts by which subscribers to-day pay $100 simply for the privilege of buying at these stores for cash plus 10 per cent, and no provision is made for the $100 to come back to them, because it is spent in managing the stores or 'educational organization.'

"Mr. Townley himself denied to me that he had any stock in these concerns, or that anybody could make any money out of them, but the insurgents inside the Non-Partisan League are asking for an accounting, and are giving the impression that the stores are not as beneficial to the consumers as they sound, the truth of which, however, is something which only an official investigation can reveal.

"It is important that something like this should occur, because solicitors are out in ten different States of the Central West preaching that the stores are not a success. Also, in order to earn their own commissions on the memberships they sell to farmers throughout the Central West, they are saying things about the actual operation of the league which may or may not be so.

"The big question for surrounding States to decide is, 'Will they recognize the good points in the league and say so, and fight the bad points by bringing the truth home to the farmers who are impressed with it, or will they unwittingly endorse agitators who are running around in other States trying to imitate the Non-Partisan League?'

"Only the people of those States, the business men and political leaders who guide the tactics of the many people who do not believe it is necessary to go to the extreme lengths of socialism to get needed reform, can give the answer."

Said Mr. MacDonald:

"I entered the country of the Non-Partisan League with some misgivings. I had seen the rise and fall of populism and knew, as everyone knows, how a movement which embodies a protest against real grievances may go down to defeat by reason of the extravagance of its demands and its easy surrender to foolish, incompetent, or self-seeking leaders.

"It needed little observation to convince me that the members of the Non-Partisan League, who, as a result of the election last November, control all the state administrative offices, all but one of the seats on the supreme court bench, and a majority of the seats in each house of the legislature, are neither visionary theorists nor wild-eyed radicals. I have seldom observed a state legislature whose controlling majority was so obviously sensible, moderate, and intelligent. The extremist of every type, the voluble expounder of radical notions, or the reformer with his one all-sufficient remedy for social ills, was conspicuously absent. The proceedings of the senate and house were conducted with the usual formalities, and the remarks of members, while serious and to the point, were brief.

"Whatever personal aspirations may have entered into its inception or its political development, the Non-Partisan League is distinctly the product of economic grievances. The men who have given their support to it are men who have been face to face with certain hard facts of existence, from whose oppressive grip the prevailing political and economic system appeared to offer no escape. As outlined by Governor Frazier, the situation was in substance this: Most of the farms of North Dakota are mortgaged, the amount of such mortgages aggregating more than $309,000,000. In order to pay the interest, which usually comes due in the fall, the farmers have been compelled to sell their wheat or live stock in the fall, soon after the harvest, when prices were lowest. Those who could not pay have had their mortgages foreclosed, and tenant farming has increased. As soon as the bulk of the farm products have been sold, prices rose, and with them the prices of flour, pork, ham, and beef. The prices of the things which the North Dakota farmer had to sell were determined at Minneapolis or St. Paul, at Duluth or Chicago; the grain elevators were in outside hands, and there was discrimination in railway rates. Speculation arbitrarily depressed the prices of the only products which the farmer had to sell, and as arbitrarily raised the prices of everything that he was obliged to buy: and the farmer was helpless.

"The platform on which members of the league were elected last November calls for state-owned terminal elevators, flour mills, and cold-storage plants, with an industrial commission to supervise their operation; a state bank, with a capital of $2,000,000, in which all state funds will be deposited, and which, besides doing the usual banking business, will make first-mortgage farm loans at a low rate; a state building association empowered to erect dwellings for farmers and industrial workers, payment to be made on an amortization plan; state hail insurance, a matter of peculiar importance in the Prairie States; workman's compensation; an improved initiative and referendum; and an attack upon speculative landlording through the exemption of improvements from taxation—and the larger part of the legislation called for is already on the statute book.

"Neither Governor Frazier nor the members of the legislature with whom I talked appeared to be deceived as to the nature of the work they are doing. They understand perfectly well that they are putting into effect a social revolution, and that it is none the less a revolution because it proceeds by due process of law. They are also quite aware that the present program of the league is only a beginning, and that its scope must widen as experience or opportunity points the way.

"The league is a political organization outside of and wholly dissociated from any party or parties, yet at the same time formulating a platform, pledging to its support the candidates of any or every party who are willing to accept it, and supporting those candidates at the polls with such impartiality that the controlling majority which the league now holds in the senate and house is in each case made up of both Republicans and Democrats. The league is an inner circle, a wheel within a wheel, a power behind the throne, ruling—and with an iron hand—through the agency of party organizations.

"I doubt if such a view would be generally regarded, outside of the league itself, as sound. The present position of the league wielding political control and claiming credit for political success, without at the same time assuming party responsibility, seems at best only a temporary device, and as a permanent arrangement quite impossible. It invites charges of secret influence, improper manipulation, and clique control, and weakens respect for party tenets and obligation. It seems inevitable that the League, particularly now that it has existence in thirteen States and seems destined to become increasingly a national political force, should abandon its policy of indirection and assume the form and substance of a national political party.

"Even more suggestive than the future of the league as a party is the theory of the organization of society for political purposes which the league embodies. The league is exclusively an organization of farmers. No one who is not a bona-fide farmer can be a regular member of it. That is to say, it is a class organization, and the fact that some 85 per cent of the people of North Dakota are farmers does not change its essential class character. By securing the acceptance of its program by the organized labor forces of the State, it has united in common political action two occupational groups, but without interfering with the party cleavages which existed in each group. It stands ready to co-öperate with any other group of workers—bankers, lawyers, teachers, tradesmen—that may choose to organize for political action and that is willing to accept the league's program.

"In so far as the league stands for state ownership or control of an increasing list of public utilities, it is unquestionably socialistic; but beyond state socialism of that sort its members do not appear to go. Instead of state ownership of land the league seeks to increase the number of landholders and to enhance their profits; and there is little interest in North Dakota in the Socialistic party. For the I. W. W., too, I was unable to discover either sympathy or regard.

"Will the league, for the moment strongly in the ascendant, endure? It will not endure in North Dakota if its enemies can prevent it. The newspaper attacks upon the league, both within and without the State, are violent in the extreme, while the mouthings of what league members aptly call "the kept press" are often so outrageous as to suggest a deliberate purpose to falsify and deceive. The record of threats, intimidation, mob rule, and personal violence toward the members of the league in Minnesota, South Dakota, Montana, and other States is painful reading. The danger is that the league, prospering under persecution, may harden its heart and narrow its vision, that its revolt against exploitation may degenerate into a revolt against every form of wealth or power except its own, and that pride in its accomplishment may blind it to the need of the education without which no community may hope to govern itself well. If the Non-Partisan League shall avoid those pitfalls, there is good reason to believe that it will go on from strength to strength."

THERE you are. You pays your money and you takes your choice. Personally we feel that it has gone to the trouble of building new and untried machinery of state government to accomplish certain things which could be accomplished just as well with the machinery we already have in State and nation if it were used to advantage by the farmers.

GEORGE MARTIN, EDITOR.

Profits for You

[CONTINUED FROM PAGE 15]

"We had two carloads of Yams from your neighborhood last winter. They sold well because they hit the market when a sweet potato of any kind was welcome. But if they'd had any competition they wouldn't have sold at all. They weren't graded, all sizes were dumped in together, and there was straw and dirt in the hampers. No matter how good your article, it's got to be put up to the public in attractive shape or it won't sell."

I knew he told the truth—I'd seen those potatoes packed that had been shipped from my neighborhood The fellows had been careless in handling the produce.

From South Water Street I went to the big department stores which had grocery and market departments, and one of these offered me as much space in their grocery department as I wanted for display purposes. They offered to feature my Yam in their advertising columns, and to furnish the sales force. The producers were to furnish the produce and give demonstrations how to cook and prepare it.

The potatoes were to be sold at a price far below that asked in the general retail markets, and the store asked only a moderate percentage of the sale price.

When I got home and began to tell my fellow farmers of the opening before us I found that the consumer wasn't the only fellow who had to be educated. The producer was in as much need of enlightenment as the consumer. The farmers were afraid to take a chance. I tried to finance such a demonstration as the Chicago store had planned.

It wouldn't have taken much. I offered to donate one full car of potatoes, so if there was any loss it would be mine. All I wanted was cash enough to take a couple of old "negro mammy" cooks up there to Chicago to put on a cooking demonstration. I offered to head that subscription list with $25 besides my car of potatoes, but my friends and neighbors couldn't see the light. They wouldn't look into the future and see what a chance for future markets for our products was held out by this chance to get our goods before the public. And as I couldn't swing the whole deal myself the plan fell through.

I have told this little potato story because it was my actual experience. But how many other farmers all over the country raising different sorts of crops are up against the same sort of thing! How many would like to break away from the middlemen if they only could and deal directly with the consumer! And all over the country how many thousands of consumers would welcome the chance to deal directly with the producer if they only could have the opportunity to do so!

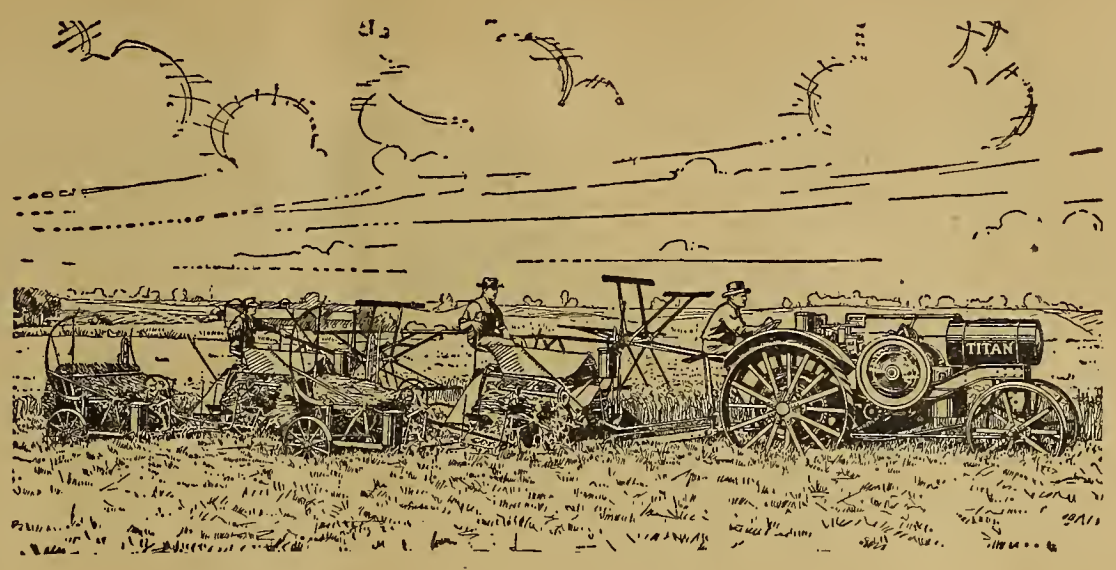
Personally I believe the solution of the problem lies in the formation of strong organizations among the farmers. Organizations strong enough and competent enough to maintain large markets in the big centers of population.

But these organizations must carry on a systematic campaign of education among the consumers—a campaign that will put the proposition fully and fairly before the consumer, and will show him where he is to be benefited by co-operating with the farmers' markets.

Think This Over

USE this magazine as you use your lawyer or your doctor. It's our business to help you solve your problems, just as it is theirs to look after your legal affairs and your family's health. We are here to work for you. Make us do it.

If you're going to remodel your house or build a new one, or put in a lighting system or water-supply system, write to me at 381 Fourth Avenue, New York City, telling as much in detail about what you want to do and how much you can afford to put into it, and I will have our expert in that line give you his best thought on the matter, and put you in touch with the best sources of supply. THE EDITOR.



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Struggle

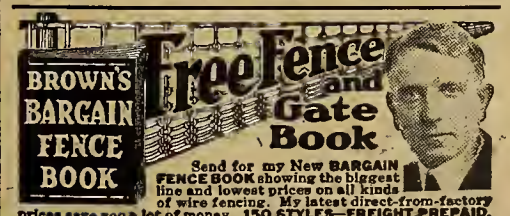
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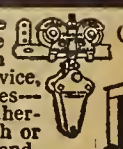
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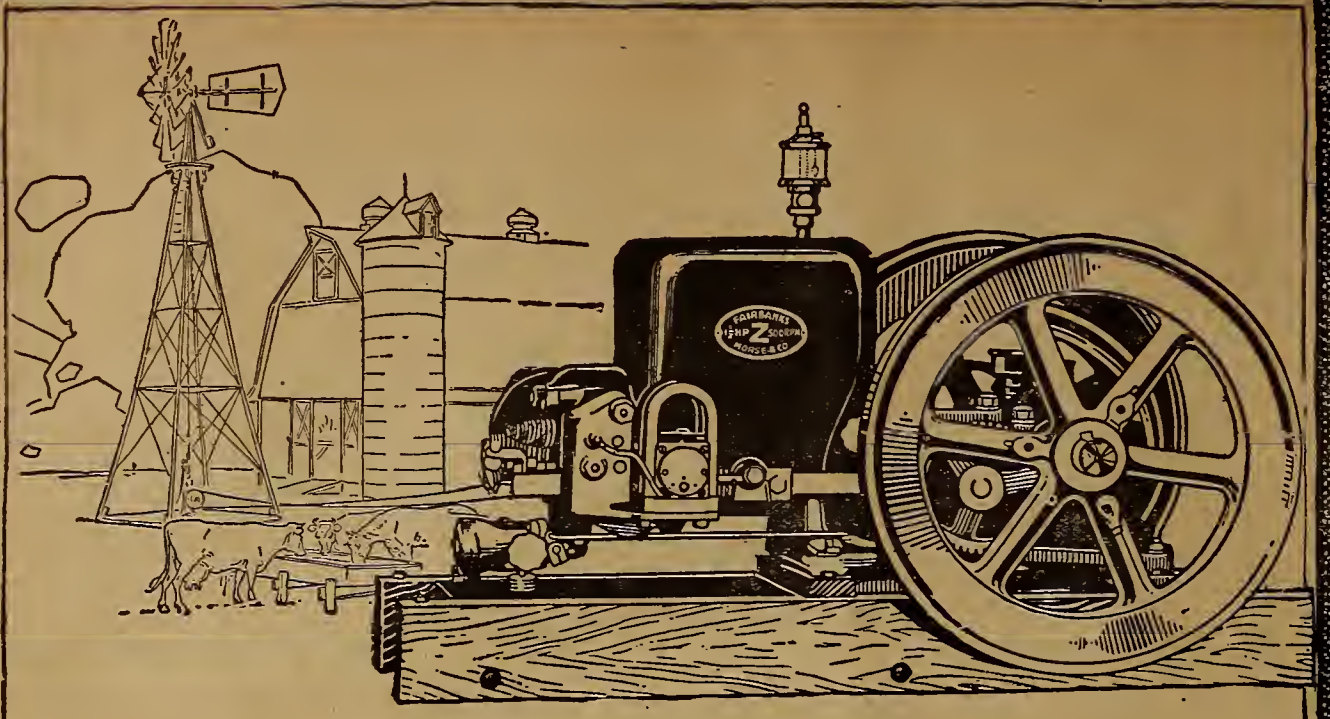
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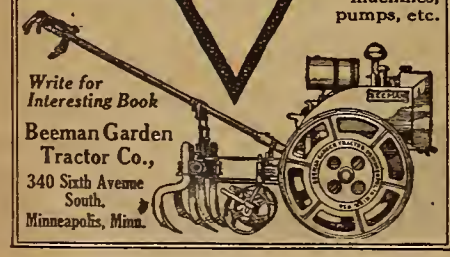
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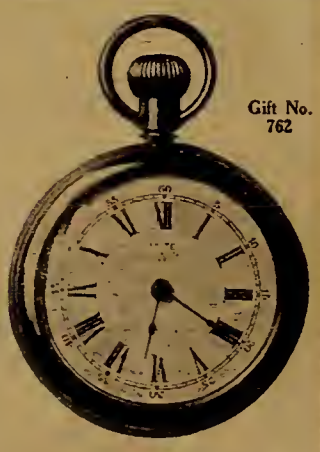
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What You Can Do

[CONTINUED FROM PAGE 11]

The most effective and satisfactory thing to use, in the great majority of cases, is *arsenate*. Arsenate may be had in several forms; arsenate of lead is most generally used. Arsenate of lime (calcium arsenate) is being used instead of arsenate of lead to an increasing extent. It is stronger and considerably cheaper; recent improvements in manufacture have made this material satisfactory to use.

But remember this: Arsenate—or any other internal poison—must be applied *just in advance* of the attack of the pests to be controlled.

GROUP TWO: This class includes *sucking* insects—the various aphids or plant lice, such as attack melons, cabbage, and sometimes even potatoes and tomatoes; the various scales and the young, or nymphs, of several other bugs and flies, such as those of the ordinary squash or stink bug, and the white fly. These are not so readily discovered as the chewing insects, for they almost invariably start on the *under side* of the leaves, and they leave no holes or other signs of their work. The first conspicious sign of their presence is a general distorted, unnatural appearance of the foliage, and dwarfed appearance of the plant, followed by yellowing and dropping of the leaves.

Control: Internal poisons *are* useless against these Huns. They must be destroyed by some so-called *contact poison*, (not a poison at all in the real sense of the word). Nicotine is the most satisfactory thing generally to use. Nicotine sulphate, 40 per cent, is the cheapest and best form in which to buy it. Miscible oil, in some high-grade commercial preparations, is also effective.

But remember this: Nicotine—or any other contact poison—must be applied directly to the pest to be controlled, *after* it has put in an appearance. This class of insects, however, multiplies with incredible rapidity, and unless spraying is done *very* promptly it may be impossible to control it.

GROUP THREE: This class includes the *root maggots* and the grubs and worms which work *below* the surface. The onion nd cabbage maggot, the corn wireworm, and the large white grub are familiar examples of this class. They are the most difficult of all to discover, as their presence is not made evident until most of the injury is done. Fortunately they are not so numerous as the others.

Control: When a plant begins to wilt, without apparent cause, examine the roots carefully for the presence of some root worker. Destroy infested plants by *burning*. Individual plants may be helped by putting a few drops of carbon disulphide or half a pint of strong caustic lime water in the soil at the base of each plant, but this is seldom attempted on a field basis. The crop may be enabled to "grow away" from the attack, however, by giving a generous application of nitrate of soda and blood or bone, and extra cultivation.

GROUP FOUR: The *borers*, such as the squash borer and, most recent and worst of all, the European cornstalk borer, like the maggots, work out of sight; they constitute the garden submarines. Wilting of the plant is usually the first indication of their presence in field crops. Sometimes a slight sawdust-like deposit, in a gummy substance, will indicate where they have entered on squash vines or fruit trees.

Control: A sharp knife or piece of wire is the standard "cure." Squash vines may be slit open near the base and the borers destroyed. The cornstalk borer, at present operating only in parts of New England and New York, is controlled by burning in the fall all stalks, weeds, etc.

The plant *diseases*—blights, rust, and mildews—*cannot be cured* by any methods as yet in use. Many of them, however, can be carefully controlled by *prevention*. For this purpose Bordeaux mixture and sulphur in several forms are used.

But remember this: These preventions, to be successful, *must* be used *in advance of the attack*. Only by keeping the new growth of foliage coated with spray can they be prevented from getting a foothold. And all parts of plants, upper and *under* surfaces of the leaves, must be kept covered.

In regard to all the above, the importance of *prompt action* cannot be overemphasized. An immediate counter attack by the farmer, upon the very first suspicion of the enemies' activity, is absolutely essential if success is to be hoped for.

Therefore (1) arsenate of lead (or calcium arsenate), (2) nicotine sulphate, 40

... [CONTINUED ON PAGE 21]

Keep an Account of Your Crop

By Robert Conover (New Jersey)

NO FARMER is in a position to exercise justice toward his business unless he keeps a record of its details. He must keep account of each crop that he raises, and with his various fields as well. The latter is even of more importance than the former, for an account with certain fields for two or three consecutive years will reveal that land's deficiency and suggest its improvement.

A great deal of money can be wasted by growing crops on soil not adapted to them. Where one crop is grown upon a field having several different soils, the tract should be roughly plotted as to soil, or a just estimate cannot be made.

No busy farmer has time for any elaborate system of account-keeping, but anyone can use an ordinary journal and keep it in this way:

At the top of the page write the name of the crop, the year, and its location. As each expense item, such as seed, soil preparation, fertilizer and its application, planting, cultivation, harvesting, etc., occurs, it is writen in the journal page opposite the date upon which the operation occurs. The hours spent in working the crop are charged according to the rate the farmer is paying for labor. Package, packing, and selling expense must also be entered against it.

Credited to the crop are the returns from the sales and an estimate of fertility value of the root and crop remains. The last-mentioned item is difficult to estimate, because it cannot be weighed or measured in most cases.

There may yet exist much of the applied fertilizers or manures which the season's crop has not used. This is also difficult to estimate. These fertilizing values cannot be credited in terms of dollars and cents, but since the full cost is charged against the crop this may be mentioned as an unknown variable credit value in the case of all crops known not to be exhausting.

On the other hand, every crop grown removes some of the original soil fertility which has been made available during its life by its own action upon the soil. Again we are dealing with values we cannot ascertain, and we have to mention it on the debit side as an unknown variable debit value.

Now as to the account with soil plots: In another part of the same journal, or in another journal, if the book is small and the farm large and crops numerous, choose a page for each plot. Write the name or description of the plot at the top of the page. In the date column write the year, then on a line by itself the crops for that year and each item of cost for the year, such as tillage, fertilizing, seed, etc., placing the amounts in the debit column. Then should follow the items of sale, prices being entered in the credit column clear of all selling expense. The balance of loss or gain should be stated below this. The plot records of each successive year should follow.

In this way the farmer can know at a glance whether a certain soil section is making him sufficient returns or is losing him money for his time and labor. It also shows him his crop successions and the tendency toward a richer or a poorer farm.

A map of the farm plan should be drawn and pasted in the front of such a book for ready reference.

What You Can Do

[CONTINUED FROM PAGE 20]

per cent (or a suitable miscible oil), and (3) Bordeaux mixture (or a suitable sulphur preparation) should be kept on hand ready for instant use.

The success of warfare against the garden Huns will depend to a large extent on the force with which the spray can be applied, and the thoroughness with which every insect or every part of the plant is reached. This means the possession of a good pressure sprayer and nozzle equipment that will enable the operator to drench the *under* side of the leaves. The pressure should be great enough to create a fine, floating mist which penetrates everywhere. One, two, or all three sprays may be applied at the same time, according to what you have to fight.

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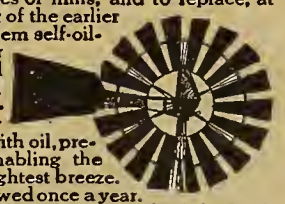
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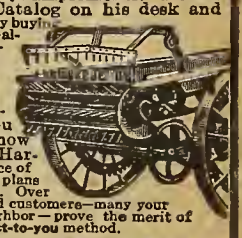


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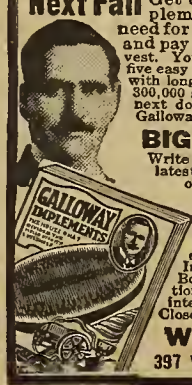


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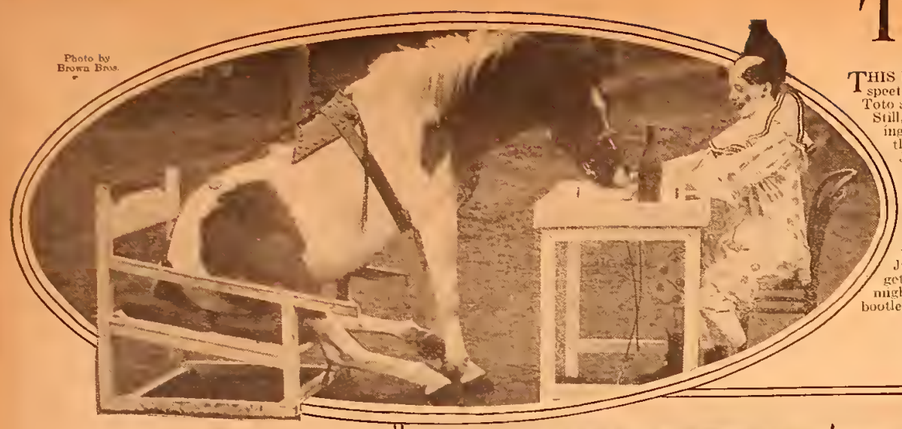
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The Circus is Coming! Hurrah! Hurrah!

Photo by Brown Bros.



THIS looks like a perfectly respectable dinner party between Toto and his friend Calico Jane. Still, Jane seems to be staggering a bit in her seat, and if this were not the first of July we might be inclined to suspect that there was something stronger than grape juice in the black bottle. And that reminds us: Mr. Ringling will probably have to cut out that elephant scene where Jumbo goes to a party and gets tipsy. Otherwise they might arrest the circus for bootlegging.



Photo by Paul Thompson

MRS. TOM THUMB, who would make just one comfortable mouthful for old Rajah, isn't a bit afraid. She's a sassy little thing, and has just asked the keeper where he stole those velvet window curtains Rajah is wearing. And as far as Rajah's concerned they might have saved themselves the trouble, because he not only doesn't care for hand-embroidered tapestry shirts, but also says the tassels tickle his nose. But, then when you hire out to a circus you have to do what the boss tells you, even if you do weigh a couple of tons more than he does.



WILLIE, whom you see holding a wire halo around his head, is the world's champion bareback performer. He was practically born to the sawdust ring, and can stand on his head, turn somersaults, dance a hornpipe, or jump the rope while his trusty steed goes galloping round the ring. But don't envy him, boys! He has to sleep wherever he can find a spot, travels all night and works all day, and doesn't make any fortune at it either. It gets to be a pretty dreary life after you've been at it a while.

IT TAKES a smart man to be really silly. This chap has spent a lifetime learning to make a fool of himself. We know some others who haven't worked nearly so hard, and yet seem to have accomplished really more along that line than he has. And the joke of it is that most of them don't know it. They take themselves seriously. "Billy" Jackson, here, never made that mistake. He realized from the first that he was a born fool, accepted the situation, and made it pay him a living. He owns a farm in Illinois, and is going to retire to it next year.



Photo by Paul Thompson

"HA-HA-HA!" says little Jake. "She's afraid of me, and I'm not as old as she is." And Bessie, mad and scared, trying to shoo Jake away with a switch, has just sworn to go and tell Mamma if he doesn't quit acting like that. But Jake's father and mother were both circus performers, and he comes naturally by his tendency to show off. He takes great pride in the fact that, unlike other animals, he has two tails, one on each end—the front for eating, and the back for wagging. It's a strange world!



Photo by Brown Bros.

OSWALD, the prepossessing grizzly young man in the black suit and white shirt front, seems to be sitting on a pin. His facial expression would indicate it, and if we are any judge the pin is doing its work extremely well.

The question that naturally arises is, "Then why doesn't Oswald get up?" Perhaps, being a circus bear, he is too well trained to jump out of focus and spoil the picture. He has probably learned well the precept, "Always be a gentleman, Oswald, no matter how painful!"



Photo by Paul Thompson



Photo by Paul Thompson

WELL, here's another clown. He's about as wide but not quite so high as the other one. We're glad to know this chap. He lives in our neighborhood here in New York. He's a man of about forty-five, and has a family of near relatives just about the same size. Sometimes the whole family will join the same show, and do a stunt together. Again, they'll get mad or something and split up—one with a circus and with a side show, a couple in vaudeville, and maybe one or two staying at home for the season.

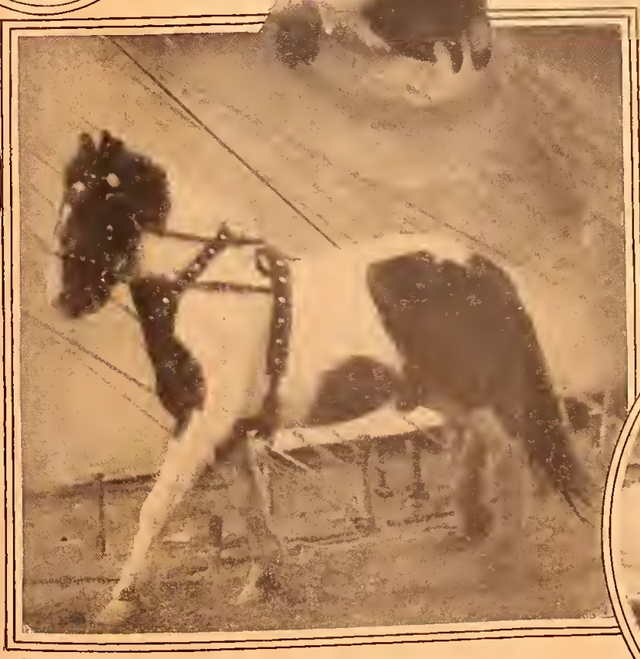


Photo by Paul Thompson

THE life of a circus pony is just one darned thing after another. Not content with making you do your share of the hauling when the circus loads and unloads, they strap you up with a lot of fancy harness and let a fool clown waltz nimbly up and down the middle of your back. And if you think that having somebody bouncing around on your spine is any fun, just get down on your hands and knees once and let them try it. But what's a poor pony going to do? He has to earn a living some way.

THIS exceedingly proud though somewhat wall-eyed gentleman is Little Roscoe, king of the trained seals. He can play the fiddle, jump rope, shake hands, waltz and two-step, bounce a ball up and down for hours on end, and do any number of other things the Lord never intended him to do. He is very human, quarrels with his wife, keeps late hours in the tank when the other seals want to sleep, and has a very distinct philosophy of life. "Today a circus performer and to-morrow a sealskin coat," says Roscoe. "So why worry?"



Photo by Brown Bros.

Thomas A. Edison Started Life as a Farmer Boy

By Albert Sidney Gregg

THIS is the home of Thomas A. Edison, in Milan, Ohio, as it stood when he was born on February 11, 1847. He was born in the corner room just back of the big tree. Edison is standing in front with his sister, Mrs. Homer Page.

The Edison home eventually became the property of Thomas A. Edison, and was sold by him, but in later years was bought back by his present wife. It is not commonly known, but Edison's father was a farmer, though not a very good one, and it was young Tom who made the family's living for a long time on the little place they owned.

There are a number of elderly people living in Milan who still remember Edison as a boy. Several of them recall a boyish boast he used to make that some day he would make wood and iron talk, and this boast has been marvelously fulfilled in the phonograph.

For a number of years he visited Milan occasionally but not recently. He presented the school at Milan with a laboratory for chemical experiments, and gave a memorial window costing $300 to the Presbyterian Church in honor of his mother. However, this window was destroyed some years ago when the church burned, and was not replaced in the new building.

As a schoolboy Edison was not much of a success. His mother took him out of school and became his private tutor.



Edison and his sister, Mrs. Homer Page, standing in front of his birthplace

Of her he says: "Had it not been for my mother's appreciation and faith in me I should very likely never have become an inventor. She was so true, so sure of me, I felt that I had something to live for and someone I must not disappoint. The memory of her willl always be a blessing to me."

Milan is a village of 900 people, 50 miles west of Cleveland and nine miles from Lake Erie. It is about 100 years old, and is strikingly like any New England village of the same size. Before the railroad came it was the second largest port for shipping wheat in the world. Connection with Lake Erie was gained by way of a canal three miles long from Milan to the river, through which the deep-water barges could be towed. The docks and shipyard were in the valley just back of the Edison house.

When it was proposed to make Milan a railroad town, residents objected for fear the railroad would destroy the canal trade, and so the town is now two miles from a steam railroad and is accessible only by trolley, and the canal is a frog pond.

Early in 1914 the county commissioner of Erie County, in which Milan is located, took steps to erect a monument in Milan in honor of Thomas A. Edison. There immediately arose a controversy as to where it should be placed. At present the tiny village square is pre-empted by a soldiers' monument. The undertaking resulted in a tablet being placed on the house in which Edison was born. This event took place in the latter part of 1915, with appropriate ceremonies.

How One Prize Feeder Buys His Cattle

By Thomas J. Delohery

D HALL owes Stanley Pierce, a neighboring breeder of Angus cattle, $400 that he never will pay. Mr. ce hasn't it chalked on his books; nor Mr. Hall it in his list of bills payable; nevertheless, Pierce says he would e made that much more from a bull had not Hall decided he must have it. learned this quite recently while in a ing bee with a bunch of cattlemen. were talking about the different ders and feeders over the county, and 's name came up for discussion—and tle cussing on Pierce's part.

That bird is a wizard at picking cattle," ce opined. "Last fall he was looking ome cattle to feed for the International, he visited my place. I let him look the stuff I had on pasture, but he d nothing that suited him. I had e fine bull calves in the barn, one of h I thought was especially good, and pt them out of sight.

Hall discovered the calves, however, had me run them out of the barn. heart leaped out of its place, for I w the good calf was a goner. I had sed $500 for him a few days before. sooner than he stuck his head out the , Hall cried, "I'll take that one!" had to let him have the animal. He e me $100, but he wanted to pay more.

d Hall of Mechanicsburg, Illinois, is wn the country over as an artist in ing beefsteaks. He holds the record winning the grand-championship honors he car-lot division of the International, re the best feeders in the country pete. He took the honors four times, lost the fifth try only by a hair—in , he lost it to the "best load of Here- s" Ike Brown, the judge, ever saw in score of years buying cattle at Chicago. rought up in the cattle business, there a thing he doesn't know about the e, and Mrs. Hall knows almost as h. Ed has been feeding cattle for more thirty years.

ven Old Dan Waters, a neighbor of , and his most bitter business enemy, s his hat off to Hall.

have known Ed Hall for years, and in a ral way knew how he made his cattle. vever, a few days after the confab, I ed his place at Mechanicsburg, and him tell me some of this methods.

ne thing unique about Ed Hall is that asn't a barn on his place for his cattle. w and market cattle are fed and sleep he open, winter and summer, rain or e. A foot of straw in the pasture is



Ed Hall of Illinois and one of his market toppers

all the comfort the stock has, even when it is 15 to 20 degrees below zero. He says it is good for the stock, and they feed better. Evidently he is right, for his exhibits beat all of the pampered cattle, and the stuff he markets sells at the top.

"I didn't happen to be a feeder," he said; "I was born that way. My father, grandfather, and, in fact, the whole family, were feeders, so I guess it is natural for me to be a cattleman too. Feeders are born and made—early training, for the most part, is the thing. I can remember when I was very little how I used to peak through the fence at the cattle my father had.

"Around here in Vermilion County one can't help but be a good cattleman. The air is charged with cattle-feeding, for all of my neighbors are crack feeders. On one side of me is L. H. Herrin, and old Dan Waters is on the other. Can you beat that combination? It is all I can do to beat them at the International. It took me quite a while to do it.

"Mr. Herrin and Old Dan are warm friends of mine; in fact, Dan used to be a partner with me in cattle-shipping. They take to different breeds, and we are always arguing about which is the best. I have won so many times that the arguments are always won by showing my ribbons.

"The thing that started me to feeding cattle for the International was Herrin's success with a load of Herefords in 1903. I knew I was as good as he was, and Dan thought he was too. So Waters took to Shorthorns and I picked on the Angus, not wanting to compete with any of them in the same breed. Since then I think my selection was the wisest.

"From 1903 to 1910, each of us fitted cattle for the show; but we never hit the mark. In 1910 I landed my first grand championship, and that spurred me on.

"In 1912 I repeated, and walked off twice more in 1916 and 1917. Neither of my neighbors has won anything since 1903."

Ed Hall has a reputation of being able to jump out of a car, take one look at a bunch of cattle, and tell you what is wrong with every animal in the bunch, also the good points. That's the way he picks his calves on the run. He has the farmer run the calves before him. He is a wizard at picking them in the embryo—his ability is uncanny, everyone admits.

I have seen Ed Hall look at a bunch of cattle before I could even take a general look at the stuff. I saw him picking calves one time, and it was a treat. He had the stuff trotted by him, and he saw one animal with good action—head erect and ear up. That was his calf. He is an old saddle-horse man, and, in fact, still has some horses. He applies some of his horsemanship to the cattle business, especially in picking calves.

"I want to see the sire and dam of a calf, if possible," he said, "or, if not the parents, the nearest relatives. Shape, type, and finish appeal to me in picking calves. I want a calf full of quality and style—one with a head like a bird, a bright countenance, and a leg under each corner, with nice quality in the bone. Coarse bone means coarse meat when the animal is finished.

"The top and bottom lines of a good prospect should be parallel, or nearly so, and I want a deep body between these lines. The rib must be well sprung, and broken off neat and square at the tail head. I look for a short neck, well set on shoulders with good style, and cut up neat around the throatlatch, so that the finished steer cuts meat to the jawbone.

"A short head, wide between the eyes and carrying a heavy jaw, is a characteristic of a good feeder that I never overlook. Neat, small ears, well set up, give a keen, bright appearance and go with an eye like a bird. I look for an oily coat of hair on a loose hide with plenty of stretch. A low flank, with a straight hind leg below, brushed by a short tail, about completes the picture of my grand-champion prospect.

"Given breeding and the mating up so that all look like peas, all that is necessary to make grand champions is to get home and feed and fit them for the judges."

Do you wonder why cattlemen marvel at his ability?

Ed Hall is a "regular" on the commercial cattle market, and he is a champion in the show pen. His stuff always lands on top, and buyers are anxious to get it. They know Ed Hall handles cattle the right way. I never saw him market a load of patchy or gobby cattle; every animal is smooth. That is his way of handling them.

Letters from Grateful Parents of Better Babies

INTENDED writing long ago to tell you how much I enjoyed the letters you sent me during the months I was waiting for my baby. I have kept all of them, and shall pass them on to someone else, hoping they will be as helpful and instructive as they were to me.

I followed your advice almost to the letter, with the result that I was unusually well during my pregnancy. My new baby is a dear little healthy boy, and I had the satisfaction of hearing my trained nurse, who came from a Washington hospital, say that she had never nursed in a private home where the mother had made such complete and sensible preparation.



Now I am sending you the date of my baby's birth and 50 cents in stamps, and wish to be enrolled in the Mothers' Club, so that I may receive the monthly letters and other literature. Kindly send my first letter at once, as you see I am a little late in writing, and then I trust that the other letters will be sent as near the 27th of each month as you can find it convenient to send them.

Thank you very, very much, and best wishes for the continued success of your valuable work. *Mrs. H. H. M., Maryland.*

I AM writing you a few lines of thanks in behalf of my wife, who has been receiving your letters for some time. We wish to thank you for the sound sense there is in them, and must say they have been a great help to us.

We wish to say also that we are the proud parents of a fine nine-pound boy. We had our case in the hospital instead of at home, and everybody remarked on the fine condition of both mother and baby. She has plenty of nurse for him, and I am glad to say they are both getting along fine.

I wish to continue getting your letters, so I am enclosing 50 cents as payment and hope you will send them.

Hoping to hear from you soon I'll close with many thanks to you and your Bureau. *J. P. C., Illinois.*

I HAVE received the last of the Better Babies letters. They were a wonderful help to me—such a reliable, punctual, and "ever-present help in the time of trouble." Your letters always answered the very questions that I had in mind to ask you.

My baby at birth was so tiny and delicate that I was almost ashamed to show her when among other robust youngsters of her own age. But now she is nearly one year old, and has developed until she is even more robust than those same youngsters. She is such a lively, happy little thing. My friends seem astonished at so marked a development in my baby, and I proudly tell them that she is a "better baby" now.

Many, many thanks for your priceless assistance. *Mrs. C. S., Oklahoma.*

IT'S nearly a month now since your last letter came, and I can't tell you how sorry I am they are ended. I read the letters to my husband, and we obey them the best possible.

Baby is round and rosy, and so good-natured; always wakes up with a smile, thanks to your help. When I wrote asking you for advice he was thin and so blue. All that he is today is to your credit. I only wish I had had your advice with my first baby, as I see it would have saved us many a sleepless night.

I am surely thankful to you for all the help you have given me. *Mrs. F. W. R., Michigan.*

JUST a few lines to let you know how much I appreciate the letters I have already received from you. They have helped me more than I can tell you, as I am young and inexperienced in anything of this kind.

My husband has read both the letters and circulars, and is as much interested as I am. We both think that you are doing a great work in helping and encouraging both the expectant mother and the baby.



I have made some of the things suggested in the circular, and will send for patterns of others, as they look so nice and comfortable. I will look forward to my letters to come. We both wish the Better Babies Bureau every success. *Mrs. E. G. Q., Pennsylvania.*

What the Better Babies Bureau Is

And how to secure its help

THE EXPECTANT MOTHERS' CIRCLE: Any woman eligible, whether she is a subscriber or not, may become a member, receiving each month a letter of advice on the care of herself and the preparation for her baby. Several practical little pamphlet circulars showing designs for maternity dresses and a common-sense layette are some of the helps sent with the letters. No matter at what period you enter, everything from the first month will be sent. No mention of the Better Babies Bureau is made on the envelopes in which the material is mailed. Enclose a self-addressed envelope with *Fifty Cents* in stamps, for postage, *and state what month you expect your baby.*

THE MOTHERS' CLUB: Every mother of young children is eligible and need not be a subscriber to join. Pamphlets, together with monthly letters of instruction on the care and feeding of babies *under one year of age* (covering such subjects as colic, constipation, weaning, teething, etc.), will be sent to any mother who sends *Fifty Cents* in stamps and states the age of her baby. There are also leaflets giving diet lists, and other helps for babies from one year of age to three years. This literature is all included in the Mothers' Club's monthly service, but if the letters are not desired the additional literature will be sent for *Ten Cents.* A self-addressed stamped envelope will bring a prompt reply to every inquiry. Address all inquiries to

BETTER BABIES BUREAU

FARM AND FIRESIDE 381 Fourth Avenue, New York City



A treat for the family

Keds for the youngsters! Keds for the oldsters, Mother and Dad! You can hardly think of anything more welcome in hot weather.

These canvas rubber-soled shoes are just chock full of comfort. They feel light as a feather. They put spring in your stride and cushion your tread.

In the fields, at the store, round the house—no matter where, Keds always fill the bill. You couldn't ask for better-looking shoes. You couldn't get any more comfortable.

Treat your family to Keds this Summer. Any good shoe-store should be able to supply just the kind wanted from the many different styles. Ask for Keds. Look for the name "Keds" stamped on the sole.

United States Rubber Company

UNITED STATES RUBBER COMPANY US RUBBER SYSTEM AND ASSOCIATED COMPANIES

Keds



By Right of Purchase

By Ernest Elwood Stanford

Illustration by Tony Sarg

DORENA KELLOGG was thirty-some. She would have admitted it. Kellogg she had been born, and Kellogg she yet was. Just why, Sledder's Cor-er didn't quite know. No beauty prizes f peripatetic medicine shows decked her antel, yet her spinsterhood was hardly ue to any fault of her clear, well-cut eatures or her straight-glancing, steel-ray eyes.

Perhaps a certain practicality of bearing, certain almost masculine swing of her all, vigorous figure, held aloof alike the iffident and those who might have been bligingly minded to rescue the fertile Kellogg farm lands from the slipshod anagement of hired men, had their owner een the sort of clinging vine that drapes ncomplainingly twelve hours a day over red-hot stove.

If ever Dorena had felt the lack of a eltering oak, Sledder's Corner didn't now. She lived alone but for the daily isits of the hired man. The traditional at, for various reasons, was replaced by n able-bodied bulldog.

Just now she was sitting on Gran'ma ulkinghorn's woodbine screened piazza, toeing off" vigorously on a gray "Beljum ock," and keeping a vigilant eye on the adway and the store across the road.

Presently appeared a well-kept farm am, drawing an empty hayrack, upon hich stood, swaying on the reins in the anner of the country, a tall, loose-inted but not wholly unprepossessing, ndy-haired citizen of some five and irty. He drove up on the scales in front the store, and leaped briskly off, while e collarless, bespectacled merchant put-red with the weights and finally inscribed result.

"You'll notice," remarked Dorena in a w voice, midway of this performance, hat Marcellus Bradley's on the ground, d the wagon's on the scales."

"Why-y—" Sa' Jane's voice began and ded in vagueness. Save for her needles, ran'ma Tulkinghorn was one vast silence. fter raising nine children and two mort-ages, and capping a successful life by coming the minister's mother-in-law, e does not risk a well-earned prestige y idle curiosity. One waits, and all things me.

The sandy person resumed his former andpoint and drove off. After half an ur or so he reappeared, this time perched on a load of hay. This he drove up on e platform.

"You'll notice," said Dorena, as the orekeeper resumed his semi-activeness, hat this time both Marcellus and the agon are on the scales."

"For the land's sa-ake!" Sa' Jane's voice ailed away before Dorena's silencing ze. Gran'ma Tulkinghorn continued to nulate the Sphinx, if one can imagine the phinx knitting a sock. As the scale eeper handed out the weigh bill Dorena epped from behind the screening wood-ne.

"Marcellus! Marcellus Bradley!"

The hay driver looked up with a start.

"Bring the weigh bill right up here!" mmanded Dorena.

Marcellus obeyed, with misgiving in his ind and questioning in his face. Thirty-ve bachelor years had made him woman-ise, or at least woman-shy. Dorena, parently, had never had designs upon s peace of mind, but—she certainly was a oman. He cast down his keen blue eyes d chewed the ragged ends of his mustache rvously as he stood before her.

"That's the hay you sold Silas Hazell, n't it?"

"Yep."

"Well, I've bought it o' him. 'Stead o' ttin' it into his barn you put it into ine."

"Why-ee—" Marcellus cast a stricken ance at Dorena, and then at the load hay. "I didn't cal'late—"

"I don't suppose you did. But I don't e's it makes any diff'rence. I've fixed it ith Si. You give me the weigh bill and ll pay you right now."

Marcellus thrust a desperate hand rough a tumbled thatch, but Dorena ok the paper from his nerveless grasp.

"'Thirty-one hundred and eighty pounds,'" read Dorena. "'Tare, ten hundred and forty pounds.' That makes one hundred and forty pounds more'n the ton I expected. Well, never mind."

She scribbled a moment on a ready writing tablet.

"Sign that! I allus get a receipt for my money."

Marcellus read: "'Received from Dorena Kellogg, this twentieth day of May, 1916, twelve dollars and eighty-four cents, payment in full for twenty-one hundred and forty pounds of hay and other materials to be delivered as ordered by said Dorena Kellogg.' Why, Doreny, I don't just see—"



From somewhere a frying pan inverted itself over the intruder's head

"About them other materials? Now look here, Marcellus Bradley! If you think I can't see goldenrod and brambles and all manner of trash that ain't hay and never will be sticking out all over that load, you miss your guess a whole lot. If I'm willing to pay twelve dollars a ton for it, I don't see's you've got any kick on what I call it. Sign right here!"

Marcellus opened his mouth briefly, but closed it soundlessly. In some respects, as Gran'ma Tulkinghorn once said, he was almost as wise as a married man. Marcellus signed.

"Sam Loftus'll tell you where to put it," said Dorena, counting out the money.

What Marcellus thought as he drove on has not been recorded. But he is known to have driven past several acquaintances unseeingly. A shrewd customer was Marcellus, and Si Hazell was fair game, but women-folks—Marcellus certainly did not look quite happy.

Dorena reached home as Marcellus and Sam Loftus backed the empty wagon out of the barn.

"Come here a minute!" said Dorena briskly. "I want to ask you about my apple orchard."

Marcellus came—dubiously. He had been asked for advice by unattached ladies before, and one never knew what might happen. Midway of the orchard Dorena halted.

"I've got to speak to Sam. I'll be right back."

On Dorena's return an enormous bulldog trotted behind her. With an involuntary start Marcellus calculated the distance to the nearest tree. Dogs were one of the two things he feared more than women.

"Don't mind Babe," said Dorena reassuringly. "He won't bite 'less I tell him to. Now 'bout these Wealthy apples—"

The consultation was soon finished, and Dorena and her adviser turned homeward, Marcellus peering backward anon or oftener at the harmless Babe, who trotted, tongue out and teeth bared, uncomfortably close to the Bradley heels.

Presently a vista between the orchard rows disclosed the farmhouse.

"Where's my team?" ejaculated Marcellus. "I told Sam—"

"I told him, too," interrupted Dorena placidly. "Sent him home with it."

Marcellus' mouth popped wide, but no sound issued. Somewhere in his cranial interior the ideas had suddenly jammed.

"Sam was getting through to-night," continued Dorena, "so I thought you might's well begin right now."

"B-begin?" The idea rebounded feebly.

"Of course. After supper you can milk the cows—"

"B-b-but—"

"Well!" Dorena's voice took on a tinge of sharpness. "When you sold out to me you didn't expect all play and no work, did you?"

"S-sold *out?*"

"Of course." Dorena waxed downright impatient. "When you loaded yourself onto that load of trashy hay and weighed yourself in it and signed the receipt you sold yourself for twelve dollars a ton, didn't you? I cal'late you cost me 'bout eighty-eight cents—mebee ninety. That's pretty much—f'r a man; but I guess mebbe I'll get my money's worth. I gen'ly lay out to."

"Doreny!" Marcellus' voice came back with a wheezy whistle. "Ugh-ah-oh—"

"Don't look so like a born idjit!" admonished Dorena sharply. "Reach up and pat your hair down! I won't hurt you if you're reasonable."

"B-but—" Marcellus' ashy face and shaky knees betokened his dread of the worst—"I won't marry—"

"*Marry!*" The sounding aisles of the dim orchard rang to Dorena's scorn. "Marry! I should say not! No, Babe, you needn't bite him—yet. But if you say '*marry*' just once more, 'Cellus Bradley, I dunno what will *happen* to you. *Marry! You!*"

Marcellus bent beneath the storm, but in his humility a certain relief was mingled.

"Quit foolin', Doreny," he begged. "I—

Dorena stamped her foot.

"Of *all* the aggravatin', thick-headed critters, give me a human male f'r the aggravatin'est and thick-headedest. You sold yourself t' me, Marcellus Bradley, same's if you were a cow or horse. You done it of your own free will, too; I didn't ask you. You can't say I didn't warn you you'd put trash in the hay. I've got witnesses. You'll stay, and you'll work, jest like any other bought live stock."

"But—but I—"

"Oh, you needn't say I ain't got a clear title. I make no doubt you've sold yourself often enough before, but nobody's claimed you. The only party 't ever will 'll wait till I'm through with you, I guess. I ain't worried about your soul. I reckon it don't weigh nothin'."

"But 'tain't legal!" With a mighty effort Marcellus exploded a whole sentence.

Dorena shrugged carelessly.

"I should worry—me an' Babe."

"But—" Marcellus quailed before a new terror overmastering that of women and dogs—" folks'll talk."

"Let 'em. 'Twon't be *me* they'll laugh at. Come and eat— You've talked more'n enough."

Marcellus obeyed. He was no man to gainsay an insane female with a ferocious bulldog. Woman, a dog, and ridicule! His trinity of terrors loosed on him at once. If ever this got out—

When his avowed owner's back was turned he took a desperate chance. He slipped through the door, whisked out the key, and locked it on the outside. Then he fled on terror-winged feet.

Dorena threw up a window. Babe went through the screen like a circus hoop. Marcellus gained a timely but dubious sanctuary in a limber sapling.

"Look here, 'Cellus," said Dorena in a voice of iron, "I ain't a patient woman, and I'm plumb wore out with you. Next time you try that you pick out a perch for the night. Come, Babe!"

Shamefacedly Marcellus followed his captor into the house.

"I ain't ever let any o' my stock critters to the table before," remarked Dorena, "but it's too much work t' set ye one by yourself. Fall to!"

Marcellus fell to, slowly at first, but, like all falling bodies, with rapidly increasing velocity. Some twenty years of strictly masculine cooking, broken only by an occasional "church supper," looked out of the past in amaze. Fluffy biscuit—happy pre-Hooverian day—crowned with golden butter such as the "creamery" may but dream of; delicately browned chicken with dressing pungent with Araby's best, flanked by onions and verdant peas, steaming in savory "cream;" coffee odorous of the blessed isles; pie—mince pie, nonpareil short of Paradise itself! For the moment the shadow lifted from the face of Marcellus, leaving its reflection by the way on that of Dorena.

"You *be* a master cook, Doreny," sighed Marcellus, pushing back his chair when man could do no more.

"I do well by all my critters," vouchsafed Dorena. "Specially the pigs. You c'n go milk now. I can't bother to foller you up, but Babe'll do. If I was you I wouldn't try any funny bus'ness. That dog's the knowin'est male critter I ever did see. And he's some like me, too. It's dreadful hard to pry him loose f'm anythin' he once gets a holt on."

She watched her property, downcast again, plod away down the path, Babe trotting close behind. Then she turned back to the devastated table, with a certain softening in her eye.

"The pore starved critter!" murmured Dorena.

Meanwhile, closely attended by Babe, the "critter" plodded through the chores. Various methods of disposing of the intelligent animal flitted through the victim's mind. They ranged from shutting him in the cow stable to impaling him on the pitchfork; but, somehow, just as he had screwed his courage to the sticking point Babe

would open his mouth and yawn prodigiously, after which dental display Marcellus would devote himself earnestly to the business in hand.

"I ain't goin' to have no scandal about this bus'ness," announced Dorena, when the chores were finished. "So you'll sleep in that shed out there. Babe stays just outside, an' he's sort of wakeful and apt to be cross o' nights, so if I was you I wouldn't disturb him. You needn't worry 'bout your farm an' stock. I s'pose I might say I took over your prop'ty along with you. Anyhow, I'll see it don't suffer."

The shed, far from palatial, had been fitted for habitation rather hastily, but somehow Marcellus, as he fingered the snowy sheets and appreciatively tested the mattress, felt little longing for the tumbled cot at home.

"She's a cook, too," he ruminated. "A master fine cook. An' cute—mighty cute. A wonderful manager—as much as it's give a woman to be. But fer farmin'"—he shook his head sadly—"she's let that wuthless Sam Loftus raise partic'lar Cain with one o' the best farms in town. 'S a shame."

If Marcellus had hoped for the morrow to moderate the rigors of his condition he was doomed to disappointment. When he demurred at being routed from his slumbers at an hour earlier than he had seen in years, Dorena promised to help his arising in five minutes by the clock. Marcellus dressed in two. She fed him bounteously on buckwheats and maple 'lasses, and sent him, hoe in hand, to greet the rising sun in the cornfield. Noon, however, brought savory consolation, and supper—strawberry shortcake!

But neither that day nor the next did she allow him speech with his kind. Whatever could people be saying? Marcellus Bradley, the sharpest "trader" in town, caught in a hay deal and held in durance by a woman! And nobody would ever believe he hadn't meant to cheat *her!* To add a little bogus weight in trading with a man was nothing more than "cute," but Sledder's Corner—and Marcellus—had certain rudimentary notions of chivalry. But Babe was ever-present. Marcellus, despite himself, took a good husbandman's pride in correcting the misdeeds of the despicable Sam Loftus. Dorena, for her part, could but soften under the unspoken but manifest tribute to her cooking. They even got to conversing amicably—whole sentences at a time.

"I see you don't keep a cat," observed Marcellus one morning.

"Got enough worthless critters," snubbed Dorena, with a shiver.

"Shows you wa'n't never intended for an old maid—" Marcellus broke off in surprise and terror at the first spontaneous, truly gallant speech of his life.

"I cal'late you'd better get your milk pail," said Dorena after a noticeable pause. But Marcellus noted a rosy flush on her averted face, which looked strangely youthful just then, and a curiously warm and unfamiliar feeling played about his heart.

The next day he saw a chance for more active chivalry. Marcellus, as he returned for supper, saw through a window a sight that made his blood run cold. Dorena knelt before the range, removing a golden-brown chicken pie whose fragrance seemed to pierce the very window pane. Behind her, stolen in unseen, a burly, tattered tramp with outstretched revolver.

"Hands up!" growled the tramp.

Dorena whirled. Marcellus felt a blazing, valorous impulse to dash to the rescue—of that pie.

A hot chicken pie of proper size, however flaky, cannot support itself unaided in midair, nor can it even be held in one hand. And the canons of Sledder's Corner demand that woman's skirt be worn to the ground—and kept there. As this veracious chronicle truly shows, Dorena Kellogg was no woman to fly in the face of convention. Nevertheless it happened—just how may never be known—that the revolver hit the ceiling smartly even before the pie, to Marcellus' infinite relief, arrived safely at the table. From somewhere a frying-pan inverted itself over the intruder's head. As he freed himself, Dorena, investigating the workings of the captured firearm, creased his shin with a bullet. With a yell he demonstrated that the injured limb was essentially sound, the tardy Babe a couple of jumps behind. The tramp, with but two legs, was built for speed, whereas Babe, though with four, was not. But it was a remarkably even thing.

"Bring in the mop when you come," called Dorena. "I'm sorry I spilled the potatoes. I'd fixed 'em up special. O-o-w! My gracious goodness me! O-o-o-o-o-ow!"

Marcellus turned, tripped over the mop, and tumbled headlong through the door. Dorena cannoned against him. Somehow in the mix-up a protecting arm slipped round a waist which never before had sought protection, and a terrified feminine face sheltered itself on a sturdy shoulder.

"O-o-o-w! Take it away!"

Marcellus' biceps swelled, and his fist bulged menacingly.

"What? Where?"

Dorena pointed, then hid her face again. Somehow, probably when the tramp had opened the door, a tiny, half-starved white kitten had slipped into the room. In the tumult it had passed unnoticed, but now it had gained the table, and sniffed hungrily at the steaming pie.

"Babe! Babe!" screamed the stricken Dorena.

But the doughty Babe, his one-cylindered mind fully occupied, was half a mile away and getting further every minute.

Slowly Marcellus grasped the situation. Dornea clung tighter.

"Oh, 'Cellus," she moaned, "take it away! I was only foolin'. 'Cellus, I never meant nothin'. Take it away! And you can go too. Take it awa-a-ay!"

Perhaps it was the unaccustomed sensation of shrinking, feminine weakness in his arms. Perhaps it was a vision of golden pies and juicy shortcakes, contrasted with a cheerless past of nauseous man cooking in a time-scorched frying pan. Perhaps it was the suffering Kellogg farm lands. Marcellus spoke with brutal, masculine directness.

"Doreny, I'll put that cat out on just one condition: Will you cook—I mean—will you marry me?"

Dorena gasped, looked up again, and spied the cat. Dorena clung closer.

"Y-yes, Marcellus," she whispered. "I'll do anything—but put out that cat!"

"See the parson to-night?" demanded Marcellus inexorably.

"Y-yes!"

"Poison Babe?"

"Yes!"

"A woman needs somebody t' look after her," murmured Marcellus happily as he hitched up for the trip to the parson's.

Meanwhile, in the dusk of the woodshed, a fluttering bride-to-be placed a saucer of milk.

"Nice kitty!" said Dorena Kellogg.

Prize Contest Announcement

Handy Household Devices

IF YOU have worked out a simple scheme to save time, labor, or trouble in your home, sell it to us and let us pass it along to other housewives so they can use it too.

We will pay $5 every month for the most practical time, labor, or trouble saving idea sent in by a farm woman; $4 for the second best, $3 each for all others we accept, and $1 extra for a *good* picture or drawing of the device. If you enclose postage we will return suggestions if we can't use them.

The only conditions are that the idea *must* come from a farm woman (you needn't be a subscriber), and it *must* have proved its value to you in your work.

The first winning devices will be printed in October. They should reach us not later than July 20th. Keep your letter to 650 words. Address Contest Editor, FARM AND FIRESIDE, 381 Fourth Avenue, New York City.

THE EDITOR.

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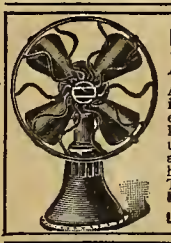


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Does Cooking for Threshing Crews Still Wear You Out?

By Anna Steese Richardson

YOU farm women of America are girding your loins to move the nation's record-breaking crops. On the success or failure of your efforts during the next few weeks the feeding of practically the entire world depends.

The uninitiated think of railways as moving the grain crop, six weeks, two months, or more, from now. They visualize long, snaky trains of groaning cars, manned by railway hands with muscles like steel and faces seamed by exposure to the elements. But you and I, who live or have lived on farms and ranches, summon a different mental picture in this critical hour—a vision of women, some of them slender and frail, starting the crops—not from railroad sidings, but from farmhouse kitchens. For if you women on the farms did not feed the harvest hands not a car wheel would turn for the transportation of foodstuffs.

One of my closest friends works shoulder to shoulder with her husband, owner of a prosperous general store in the grain belt. Her last letter was extremely brief, just the news items of her family circle, and it ended thus: "Sorry I cannot write more to-night; we're driven to death at the store, and I come home every night dead-tired. You know how it is this season of the year. The ranchwomen are stocking up for the harvest hands. And it's different from last year, too. Precious little conservation now, for the women are laying in big stocks of sugar, molasses, raisins, chocolate, and all sorts of stuff for baking. Record crops mean a long table for the ranchman's wife."

I can see those tables, stretching by thousands, from one end of the growing country to the other; kitchen and dining-room connected with the main house by covered runways; other eating-rooms which are to the living-room as the tail which wags the dog; daughters of the household; the children too young to work in the fields, and that priceless of treasures, the hired girl, spreading plates, stacking sliced bread, drawing chairs; and the queen of the situation, the farmer's wife, after one swift appraisal of pots and pans on the stove, announcing, "Everything's ready. Ring the bell!"

As a child, how I used to fight for the privilege of ringing that bell which hung from a cross-bar between cedar posts, almost hidden by white rambler roses! And how wonderfully far its voice must have carried, for from the most distant corners came the men, their backs straightening as they sniffed the savory odors floating through the open kitchen door.

And later, switching flies with a lilac branch, I often wondered fearfully whether the table would be swept clean of the favorite dishes before we children had our turn. The importance of the hired hand was ingrained upon our consciousness along with the fear of rain on the heels of cutting the hay.

I Was Warned Not to Tickle Bill Haley's Ear

In after years, when I learned what it meant to bake cookies by the hundred, pies in dozen lots, and to fry enough doughnuts to fill the old boiler, I understood better the tense expression on the face of her whose hand sometimes trembled when she handed me the lilac branch, and warned me not to tickle Bill Haley's ear. Even though men bent low over their plates, the arm of a ten-year-old sometimes ached at the task of switching flies above the table.

So when the Editor of FARM AND FIRESIDE asked me to study modern conditions under which women feed the army of harvesters, he roused not only a host of memories, but also a keen curiosity as to what progress had been made in farm kitchens since the day when half a dozen of us women dropped our domestic anchors in the very rawest section of a now famous irrigation belt, and, by the aid of our shack stoves, competed for the all-desirable and well-nigh unobtainable harvest hand.

Since those days the entire rural world has been geared up to new standards. Automobiles and electricity have reached farms and ranches. The spring or pump, always located nearer the barn than the house, you remember, has been replaced by the artesian well, with its windmills or gasoline motor. The brook once sacred to wading now supplies dynamic power. The extension course of the state college of agriculture, the U. S. bulletin, and the home demonstration agent have invited the farm housewife to come out of the rut in which her mother and grandmother lived, toiled, and died.

The investigation proved fascinating.



Home demonstrators are making rapid progress in rural communities

The farm wives who seem to have gained most through labor-saving devices and educational opportunities are those who live in sections farthest from the so-called centers of invention and progress. In what was once a vast stretch of sagebrush I found the best-equipped farm kitchens. The States which might be grouped as West, North, and Northwest boast the largest proportion of up-to-the-minute housewives. With them, farming and ranching are an established business, profession, trade, to be handed down proudly from father to son, from mother to daughter.

It was especially interesting to find on ranches which had once been the haunts of coyotes, jack rabbits, and prairie dogs kitchens in which running water stood between the owner's wife and aching muscles, drainage to cesspools which lightened the burden of dishwashing, individual electric-light plants and gas-producing machines which have banished the toil of filling and cleaning lamps. It was fascinating to find coal where I once burned piñon boughs, to see furnaces and steam-heating plants instead of half a dozen small stoves, to bend over a gas stove where I had once burned brush.

From kitchens such as these the old rocking-chair, with its embroidered towel across the back, and the old lounge with protruding springs have disappeared, but with them also has passed the interminable need of a place to drop for a minute's rest.

In rather striking contrast was the equipment of a kitchen on a country estate in a fashionable Eastern section. The cottage occupied by the farmer or superintendent boasted an artistic exterior, following the general design of all the buildings scattered at an agreeable distance from the owner's English manor house. It was cleverly planned and well furnished by the owner, lighted by electricity, heated by hot air, and supplied with both running water and drainage. The dining-room, tastefully furnished in mission style, was large enough to accommodate comfortably the ten hands whom the farmer's wife boards the year round. The kitchen was proportionately large, and one entire wall was hidden by a coal range of hotel size and style. In reply to the query as to whether she used an oil stove in hot weather, the farmer's wife said that she could not get one large enough for her needs, and, anyhow, she was a bit afraid of them. With electricity installed for lighting, she still churns, washes, irons, and mixes bread by hand power. Yet across a green ridge, less than half a mile distant, cows are milked, cream is separated, and the dairy laundry is all done by electric power!

This woman is not a victim of her husband's stinginess. She merely suffers from her own complacency in conditions which "were good enough for Mother."

Here are average menus served by farm women in different sections of the country:

New England Stock Farm	Pennsylvania Truck Farm	Nebraska Ranch
	Breakfast	
Bacon	Sausage	Oranges
Eggs	Potatoes (fried)	Oatmeal
Potatoes (fried)	Eggs	Ham
Biscuits	Hot cakes	Eggs
Pie	Syrup	Potatoes (fried)
Doughnuts	Cookies	Biscuits
Coffee	Cottage cheese	Coffee
	Coffee	
	Dinner	
Boiled meat or pot roast	Baked ham	Stewed chicken
Potatoes	Mashed potatoes	Potatoes
Beans	String Beans	Rice
Brown bread	Hot slaw	Young beets
Pudding (corn-starch)	Preserves	Tapioca pudding
Cake	Bread	Cookies
Cookies	Steamed pudding	Coffee
Tea	Milk and coffee	Raised biscuits
	Supper	
Cold meat	Deviled eggs	Cold meat
Fried potatoes	Creamed potatoes	Spaghetti with tomato and cheese
Pickles	Cold meat	Bran biscuits
Cornbread with syrup	Prunes	Stewed fruit
Cold baked beans	Layer cake	Loaf cake
Apple sauce	Tea	Tea or cocoa
Cake	Jelly	
Cookies		
Tea		

(The Western farm woman buys more fruit and cereal than her Eastern sisters.)

In discussing the food situation with grocers, wholesale and retail, it was interesting to find that the more progressive the farm management, particularly the equipment of the kitchen, the more apt the housewife to adopt the city breakfast of fruit, cereal, and eggs with the relish of smoked meat and whole wheat or bran biscuits, and to reduce the item of sweets to a single dessert.

In more than one kitchen I found a weekly dealing exclusively with current events, national and international, a monthly of the highest literary standard, one or more magazines devoted to home-making and baby-raising, wide-awake agricultural papers with ample space devoted to farm women, and at least the weekly or Sunday edition of a first-class newspaper from the nearest city.

And everywhere I found bulletins issued by the U. S. Department of Agriculture and the state universities and schools of agriculture.

But in spite of improved kitchen facilities, from screened windows to canned goods, the burden of the host of women who must move this year's record-breaking crop remains heavy, appallingly heavy. During practically all of that precious season when the farm woman might be outdoors after weary months of confinement indoors, she must stick to her stove that a world may be fed.

After all, the real bogy which haunts the farm wife with the approach of the harvest season, the bogy which has never been laid even with money at her command, is that of help.

The U. S. Government, through the Department of Agriculture, has taken a hand in this very serious situation, and is working through its home demonstration agents, a branch of the States Relations Service, and a form of extension work which has made rapid progress, particularly in the North and West.

Home demonstration agents work along two lines: First, by interesting farm wives in simpler meals prepared by modern methods; second, by organizing in school centers, rural and urban, girls' working reserves, consisting of girls and young women sufficiently interested and patriotic to help the farm housewives feed the harvest hand, of course for the regular financial consideration.

By the first method the home demonstration agent comes in direct contact with the farm wife at the grange, schoolhouse, or a centrally located farm, selected for the meeting. By her practical suggestion and her optimism she spurs the tired farm women to renewed and simpler effort.

By the second method she works in larger and less detached communities, mobilizing an army of willing workers for the farm kitchens of her particular district. In either line of endeavor she is part of the organization known as the Farm Bureau, and co-operates with the county agent, the leader of the boys' and girls' clubs, and other servants of the U. S. Government and the state college of agriculture.

More than seventeen hundred home demonstration agents are now at the command of rural housewives, and to describe the wonders which they have accomplished would require an entire issue of FARM AND FIRESIDE. You can learn more of this by writing to the States Relations Service, Department of Agriculture, at Washington.

In closing I cannot refrain from relating one incident which bears directly and humorously on the help problem. It was supplied by a busy housewife on a Midwestern farm:

"For a good many years a cousin of mine, living in the city, has been sending her children to visit me at intervals during hot weather. Last May I received this characteristic note from her: 'Everybody's talking conservation and economy this year, and nobody seems to be going to the seashore or mountains. So I am writing to ask you whether it will be convenient for you to have Mabel spend July with you. She is run-down from working in the store, and I think country air would do her good.'

"In reply I wrote: 'Yes, indeed, we'd love to have Mabel with us in July. I have never been so pushed for help, and while I don't suppose she's strong enough to join the farmerettes who are working for us, I'll be glad to pay her regular wages to help me cook for them. You'd be surprised at how much those girls can eat—just like hired men!'

"Mabel did not come, of course!"

I commend this procedure to all farm women walking in the shadow of summer visitors. Hang up the work-or-pay sign, politely worded, and take one legitimate step in protecting yourself from summer slavery.

How I Save Myself Time and Trouble Cooking for Harvest Hands

By Edith M. Updegraff

IF YOU are not used to planning your work ahead, why not try it during this harvest time and see how much more smoothly things run than they did last year?

I always begin my planning several weeks before the extra hands are due to arrive, and then am not rushing around the last few days trying to get things ready. The first thing I do is to increase my help, if possible. And when I plan ahead I can usually find someone. I never try to do it all myself. Although I am particular about making my own pastries and most of the other dishes, my help assists me in preparing the foods. I always allow them to assume some responsibilities—give them definite duties each day, and then do not have to repeat instructions incessantly. I find that they enjoy their work much more if they know they are depended on to get certain things done.

Next, I plan my menus. One of the commonest mistakes housewives make, I think, is to try to get too much variety in one meal. I, too, used to make the mistake of having two or three desserts at one meal, but have convinced myself that the men are better off with one, and that that time and energy can be spent more profitably along other lines. Not only does a variety of desserts at one meal enlarge the expense account, but it also endangers the digestion of the man. One dessert is enough at any meal.

Another common blunder is to duplicate food. For instance, it is waste of time and energy as well as fuel to prepare two starchy foods at one meal. It is well to substitute such foods for one another, but they should not be duplicated.

One of the wisest suggestions I have seen concerning the preparation of meals for farmhands appears in a bulletin issued by the Kansas State Agricultural College. In this Miss Cox says:

"Ordinarily too many kinds of food at one meal are served to harvesters. This is due to tradition, pure and simple. It is true that in many localities a great array of food is expected, and even demanded, by the men, but that is no reason why the custom should be continued indefinitely. A spirit of rivalry among the wives of the community to see which can serve the greatest amount of food to the harvesters, only helps to strengthen traditional custom. If these same wives would meet and co-operate in the work and decide definitely on type menus that are sane, well-balanced, and sufficiently flexible to admit adaptation to circumstances and season, a great good would come to the individual home and to the community."

After planning the menus I know pretty well what I am going to need, and can buy intelligently. I usually buy in large quantities—it's economical and saves much time. Of course, I don't hold tenaciously to the planned meals, as I can't tell ahead what will be left over, and I always use those left-overs. But I have a much more definite idea of what will be used than if I just bought at random.

When preparing meals I find that I waste less energy if I bring out of pantry and icebox all supplies and foods to be used and have my kettles and pans conveniently at hand. I once watched a bride make her first cake. She took just two hours to prepare that cake, for she put in most of her time making unnecessary trips to the icebox and pantry.

After breakfast or dinner I prepare my vegetables for the next meal, make my dessert, if it is one that can stand a while, and get everything prepared that I can. Then I go out of the kitchen and rest, or do almost any other sort of work as a change, and when I return to the kitchen I have a fresh start.

Following are a few menus I have worked out; they seem to satisfy the men and do not call for an unusual output of time and labor:

Breakfast	Dinner	Supper
Cream of Wheat with Raisins Scrambled Eggs with Chopped Bacon Hashed Brown Potatoes Bran Muffins Coffee	Roast Beef Gravy Mashed Potatoes Escalloped Apples Spaghetti with Tomato Sauce Buttered Beets Jelly Bread Apple and Rasin Roll	Creamed Roast Beef on Hot Biscuit Browned Potatoes, Buttered Carrots and Peas Mixed Pickles Preserves Peach Tapioca Cocoanut Cake
Breakfast	**Dinner**	**Supper**
Corn Flakes with Bananas French Toast with Syrup Potato Cakes Scrambled Eggs Bran Bread Coffee	Italian Stew Fried Potatoes Creamed Corn Glazed Turnips Tomato Salad Steamed Chocolate Pudding with Chocolate Sauce	Meat Loaf (Hot or Cold) Creamed Potatoes Kidney Bean Stew Cottage Cheese Salad Pineapple Whip Cake
Breakfast	**Dinner**	**Supper**
Oatmeal and Cream Rice Cakes with Maple Syrup Fried Eggs and Ham Baked Apples Coffee	Pork Sausage Fried Apples Spanish Potatoes Creamed String Beans Preserves Pickles Peach Pie	Creamed Chipped Beef on Toast Greens Baked Rice with Cheese Cold Slaw Jelly Apricot Whip Cookies
Breakfast	**Dinner**	**Supper**
Grape Nuts and Cream Minced Ham and Scrambled Eggs Creamed Potatoes Hot Biscuit Jelly Coffee	New England Boiled Dinner Horse Radish Lettuce Corn Bread Jelly Tapioca Pudding Milk	Corned Beef Hash Poached Eggs Greens Sliced Tomatoes Corn Bread Fruit Cake Tea

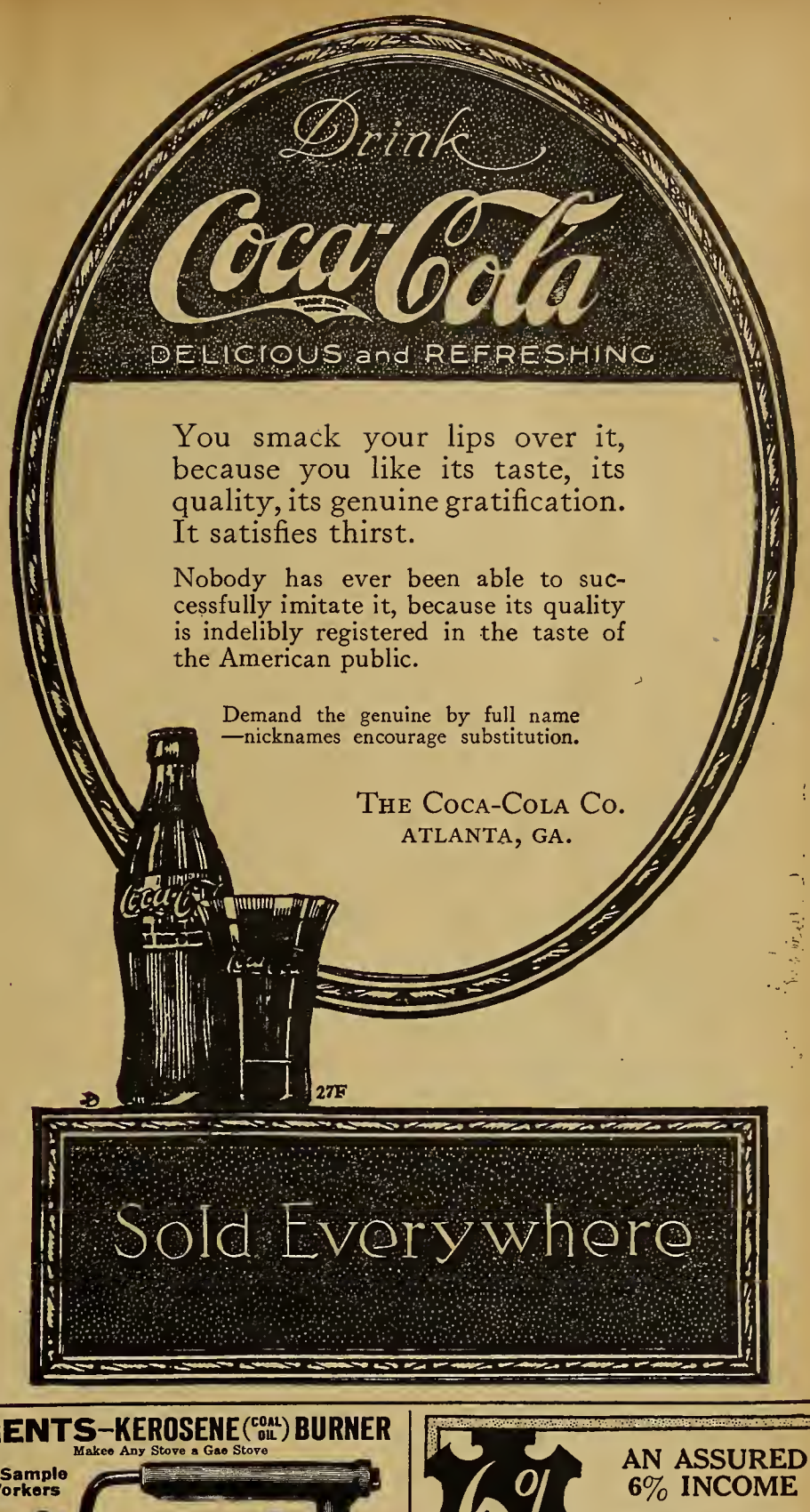
BAKED RICE WITH CHEESE—Three cups boiled rice, two tablespoons melted butter, one-half cup grated cheese, one-half cup milk, one-half teaspoon salt and one-eighth teaspoon paprika. After boiling rice until tender, mix in milk, butter, and seasoning. Add grated cheese and place in baking dish. Bake until brown. This is nice if a tomato sauce is poured over it.

KIDNEY BEAN STEW—One and one-half cups kidney beans, one cup canned tomatoes, one-half cup boiled rice, two tablespoon flour, one onion (fried), and one teaspoon salt. Cook beans until tender, or canned kidney beans may be used. Wash rice, and cook thoroughly. Add tomatoes which have been cooked, fried onions, seasonings, and mix with kidney beans. Cook down until all are well mixed.

GLAZED TURNIPS—Pare and wash turnips. Cut in slices, and cook until tender. Place in baking dish, add salt, pepper, paprika, and butter. Dredge with flour, add a little water, and bake until a delicate brown.

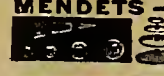
Think This Over

IF THERE is some household appliance or farm tool or implement of any description that you want and don't know where to get it, or what kind to get, write to me, care of FARM AND FIRESIDE, 381 Fourth Avenue, New York City, and I will try to see that you get the information. THE EDITOR



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Little Things to Think About That Will Help You with Your Farming

Shock with Machinery

By Earle Gage (New York)

THE new grain shocker sets the harvested grain bundles up in the field, and saves the farmer a third to a half on labor. One Kansas farmer harvested 150 acres of heavy wheat without any extra help. On level ground the grain shocker, when attached to the reaper and binder, will harvest at least 20 acres a day.

The shocker is carried on a low-wheeled truck at the rear of the binder, and is cooperated with it to shock grain while the binder is in motion. As the bundles are tied and discharged from the binder deck they engage a trip which, through its connection with a clutch finger, permits a shaft to connect with a sprocket, forming a complete movement of the fork, which is raised from its position at the proper time to bury its tines in the bundle just discharged and carry it to the shock setter. As the fork moves back and forth it carries the bundle to two positions in the shock setter, alternately depositing a bundle first on one side and then on the other, with the butts spaced and the tops overlapping, making a sort of wedge-shaped shock. These movements continue until from seven to eleven bundles have been deposited.

When filled, a trip latch permits the knotter shaft to rotate, which in turn operates the compressor arm and needle, causing them to compress the bundles and tie them together. The platform is pivoted, and when the shock is ready to be set it is tipped backward automatically and set firmly on the ground.



How one Canadian farmer cut his harvesting expense

HERE is how a grain farmer in Saskatchewan, Canada, saved labor in harvesting his grain crop. By building the carrying rack shown, and placing a carrier belt of canvas from the binder to the roller at the end of the table, he was able to load the sheaves directly on the grain rack which the team hauled alongside. It is essential that the rollers at the ends of the carrying rack be made loose enough to work easily, and kept well oiled. The canvas curtain belt must have plenty of give to work freely, though not so loose as to whip, and catch the grain underneath. The power of an ordinary grain binder is sufficient to run the carrier.

The sheaves should be stacked, not placed directly in the barn. The stack should be so built that there will be ample ventilation for proper curing. In Canada there are plenty of horses, but generally a shortage of men, which means that this farmer could well afford to use one team of four horses, another of two horses, in an operation which demanded but two men, whereas it would have taken more men and as many horses to accomplish the same amount of work in a longer period.

He Grows His Own Feed

By P. T. Hines

IF YOU ever get to Raleigh, North Carolina, just ask the milk inspector what farmer delivers the best milk in the city. I'll wager his answer will be, "E. W. Worth." Mr. Worth has no trouble at all in selling for the highest market price all the milk his forty-five Jersey cows can produce.

He bought the farm he now owns about six years ago. At that time it was in poor condition. For one thing, it was extremely rocky. Then there were washes and a crying need for terraces. The buildings were poor.

But Mr. Worth did not say that the farm was in such bad condition that he would buy the feed to feed his cows for ever and ever. He went to work to get his farm in good shape—getting off the rocks, terracing, growing legumes for turning under, using every available ounce of manure—and merely bought what feed he had to have, working to the time when buying feed would be unnecessary.

And it was not long necessary for him to buy food. One of his first moves was to erect two silos. He then made it a practice to grow plenty of roughage. I was at his farm last summer, and his son was mowing on a 30-acre field of vetch and rye, and one glance at the crop convinced me that in the last six years he has brought up his land to where it will give him big yields.

With the abundance of manure now produced by his large number of dairy cows, Mr. Worth has found it economical to go into general farming on quite an extensive scale. There is always some leisure time between milkings, so this progressive dairyman uses this time in growing corn, cotton, and wheat, as well as other crops and various rough feeds for the silos. In fact, much of his success is due to the wise use of time and labor.

The farm of this dairyman now has good equipment. There is a modern home with gas lights and waterworks, the barn is modern in every way, and the farm machinery is of a modern type, including a tractor.

Another crop which this dairyman takes great pride in is his boys, of which he has five. And they are a fine, clean, handsome set of youngsters. The oldest is only fifteen years old, yet as large as the average man, and cheerfully does the work of a man. The two next in age deliver the milk in the city of Raleigh, and you will travel far before you find two boys more cheerful, willing, and efficient. They work *with* "daddy," instead of *for* him.

Do You Brand Your Butter

By J. T. Bartlett (Ohio)

"A POUND of good dairy butter, please," said the customer.

"Dow's is fifty cents, Denman's sixty," the storekeeper explained briskly. "Which'll you have—Denman's?"

"No," the customer's tone was conclusive. "We had a pound of Denman's the other night. Worst butter I ever tasted!"

"How did you know it was Denman's? Mrs. Denman doesn't print her name on her butter. Her butter is always extra nice."

"You told me yourself the stuff was Denman's. Give me Dow's."

Which floored the storekeeper. He handed out a pound of 50-cent butter.

The explanation of this was simple. The storekeeper had overreached himself, as storekeepers sometimes will. He had sold for Denman's, butter which was really the product of a less competent buttermaker. He had done the same thing before. He will doubtless do it many times again. And inevitably he will pay heavily in injured good-will for his poor business judgment.

But there is another angle to the incident. It revealed the ugly thing that was happening to the Denman reputation, innocently entrusted to a grasping merchant. What this good farm woman gained at the separator and churn she was losing because she overlooked a simple little thing—the branding of her butter. Old-fashioned New Englanders still make butter with sheaves, cows, initials, and the like, molded in the butter itself, a distinctive farm brand which no dealer's chicanery can remove. Many buttermakers in other parts of the country where the brick is the universal butter form do not use printed butter wrappers. Some others do not use either stamp or printed wrapper, but simply write the name on a slip of paper and place it beneath the wrapper. Such slips, of course, can be easily lost or removed.

When a stamp and pad are used the imprint is often smutted out and undecipherable when it reaches the consumer.

The farm making poor dairy butter has no particular ground for advertising it. There are a good many in this class, so many, in fact, that excellent buttermakers in self-protection must brand their butter unless they deliver it to consumers in person. The printed wrapper is ordinarily the best protection. The cost of the printing is negligible; the protection is complete; the advertisement of great value. The home buttermaker whose product sells at a premium on the local market has something to point to with pride. Such a reputation, attained only with great pains, can be destroyed in a month by a dishonest dealer unless the producer safeguards it.

Pests That Are Welcome

By Delos Hatch (Wisconsin)

WHEN I hear farmers bragging about the hawks, owls, weasels, and minks they have killed, my "dander" begins to rise. Here in this Wisconsin community such wholesale killing of rodents, owls, and hawks was the common attitude when the country was newer. But there has been a radical change. After the killing and trapping of these so-called "pests" had continued for several years, a plague of rats and mice assailed us. With the rodents' natural enemies killed off they multiplied until corn and grain fields, meadow, orchards, and buildings swarmed with rodents, big and little. Half, and even more, of our grain crops were sometimes destroyed in fields and storage.

We got our lesson, and now we make our poultry houses pest-proof, and give a kind welcome to weasels, owls, hawks, snakes, and toads—all friends of the farmer—and song and game birds as well. What is the loss of an occasional chicken, a few cherries, and small fruits compared with the damage done by hordes of destructive rodents and insect pests?

Have You a Good Place to Store Wheat on Your Farm?

JULIUS H. BARNES, United States Wheat Director, in speaking of the 1919 wheat crop, says indications are that the storage facilities of the country will be taxed to the utmost to carry the grain, and that it is very likely that there will be periods at the height of the crop movement when wheat will have to be allowed to back up on the farms for lack of storage in local and terminal elevators.

The principal things to guard against when storing grain on the farm are dampness, insects, and vermin. Bins must be tight, and be made vermin-proof as far as possible. It is also a good plan to fumigate before filling with grain. Buy a solution of carbon bisulphide at the rate of one pound for every 35 bushels the bin holds. As the fumes are heavier than air, place the liquid in shallow pans near the top of the bin, and close it as tightly as possible for at least thirty-six hours, keeping all fire or light away from the building until the fumigation process is over and the place is thoroughly aired.

Strips of sheet tin tacked around the foundation piers of the granary will prevent the entrance of rats and mice.

If you feel that there is any possibility of your not having bin room enough to handle your crop, it might save you trouble to plan *now* just where you will put it. Perhaps one end of the corncrib or granary can be boarded up. Maybe you have an empty box stall in the barn that will hold several hundred bushels. It will save you lots of worry if you pick out these storage places now, instead of waiting until the other bins are full and the grain wagons have no place to unload from the machine. When planning, keep in mind that dampness is injurious to grain, for it is possible that several months may pass before you can move it.

It might be well to investigate the possibilities of the portable metal storage bins. Their first cost is not prohibitive, you can set them up anywhere in the field, and they might be the means of a considerable saving to you later on.

He Built a Laying Strain

By M. M. Clark

MY PURE-BRED strain of Barred Rocks had no remarkable ancestry, but for years my aim has been to develop and maintain a first-class laying flock having exceptional vigor and early maturity. I have never allowed color, barring or other fancy points to stand in the way of selecting my breeding stock for utility purposes. Nevertheless, my stock has not deteriorated in respect to color or appearance to any injurious extent. They are still a fairly good average in all standard requirements except size. They are just a little below standard in weight.

I have not practiced trap-nesting as a means of selecting the birds for my breeding pen, but I have learned to know by actions and behavior which are the best producing individuals, and which at the same time have the exceptional vigor required. I no longer have any anxiety as to what the laying quality of my young stock will be. I know I can always depend on regular and steady egg production from my pullets throughout the winter, and for about ten or eleven months out of the year, if I do my part and get the chicks hatched in time to mature before cold weather arrives. I have proved to my own satisfaction that no Leghorn, Minorca or other so-called egg breed can out-lay my Barred Rock strain in a test of a given number of years. I backed up my judgment in this matter by entering pens of pullets in the Connecticut Laying Contest for several years, and find that they stand the test.

A Wedding on the Lawn

By Emily Rose Burt

A GIRL who lived in a small town and had a big lawn chose to be married outdoors in the latter part of July. ıe blossoming hydrangea hedge in front of è house was made thicker with small ergreen branches stuck down into the ɔund. One corner of the yard, where ere was a natural alcove curving in ıong the shrubs, she picked out for the dding itself. The porch was decorated th Japanese lanterns and flowers, and forehand the guests gathered in groups ere or on the lawn.

When it was time for the ceremony, ne girl friends of the bride marshaled e guests to the chosen place, and then urned to the house to act as ribbon girls. ıere were about a dozen of them in light mmer dresses, and the first couple, lding the ends of long white ribbons, eceded the bridal groups, roping off an le across the lawn and among the ectators.

A chorus of young musical friends came st, singing the words and music of ohengrin." Following them came a ck of flower children, tiny girls and boys, ttering flower petals from the high- ndled baskets swinging in their chubby tle hands.

Last of all, four abreast, came the bride and bridegroom, the bride's mother, who gave her away, on the right of the bride, and the best man on the left of the bridegroom. The ribbon girls had accompanied the procession at the proper intervals, holding the aisle ribbon, and the last two brought up the rear, winding up the ribbon as they came.

The reception took place immediately afterward on the lawn, and the guests were served with ice cream and cake wherever they chanced to be, by the attentive ribbon girls.

In the back yard, at a long table, a colored caterer superintended the serving of the refreshments.

Altogether it was a most successful wedding and at the same time a fairly easy one to plan, since there was no question of overcrowding in the house, although in case of rain it could have been managed there.

NOTE: Half-a-dozen wedding color schemes suitable for summer-time will be sent on receipt of a stamped self-addressed envelope. Address Entertainment Editor, Farm and Fireside, 381 Fourth Avenue, New York City.

You Can Increase Your Threshing Yield

[CONTINUED FROM PAGE 13]

ıs the stuffing of the machine done, and entirely with the approval of most of e crew, that the owner of the grain was werless to stop it.

Evening came with the job—which ould have been finished—still far from e end. The wind still continued and ought a drenching rain in the night. But addition to all the inconvenience, the ded cost, extra meals and extra work, ere were probably in the straw stack 30 40 bushels of barley, enough for a fair- ed market load, wasted in one day by d threshing management. To grow that rley took about an acre of good land, an tire growing season, seed, labor, and ine.

Since that time a good many of the new odels of threshing machines have been uipped with governors which stop the ndle conveyor when it is overloaded with ndles. The success of such a device, wever, depends on its proper adjustment, ich again involves the human factor. ıd while human nature has remained out the same since the time of the inci- nt described, the costs of farm operations ıd farm products have greatly increased, ıich is an additional reason for selecting reful and steady men as bundle pitchers.

The principal causes of wasteful thresh- g for which the thresherman is responsi- e are:

Improper adjustment and dullness of eth, failure to use sufficient power to ep the machine at proper speed, and lack care in leveling the machine.

Allowing grain to leak out on the ground ound and under the thresher.

General bad order of the machine ırough neglect to make needed repairs, ıd unskilled handling.

When the ground on which the thresh- g machine sets is soft, it is best to provide me substantial material so the wheels ill not sink in, because one side is likely sink farther than the other. A machine ıat is not level, especially from side to de, causes the grain to accumulate on the w side and will not do its best work. ut by means of the so-called "blanket st" anyone may quickly satisfy himself s to whether the grain is going into the ck or into the stack. That, after all, is ıe important thing to know, and every onest and competent thresherman should elcome the test. It puts threshing out- ts on a basis of real comparative merit. the test is favorable it means good will ıd satisfaction. If unfavorable, it gives ıe competent operator of a first-class out- t a chance to correct the cause of waste. ı brief, the blanket test is the grain grow- 's evidence of the threshing service he is etting. It is useful also in checking up ıe true merits of the various small-sized ıreshing machines which during the last w years have been developed for individual farm use and as community investments.

Here are the official directions for making the blanket test. They apply to any standard threshing machine and to all kinds of small grain threshed with the ordinary outfit.

To make a "blanket test" secure a sheet of canvas or any other suitable cloth about 18x24 feet in size. Secure a coarse screen from 24 to 36 inches in diameter. Spread the sheet on the ground, convenient to the stacker of the threshing machine, and station a man on the top of the machine near the weighing device. Immediately after a trip of the weigher drop the hood so that all the straw, etc., passes onto the sheet, and allow the straw to deposit thereon until the weighing device trips five complete times, indicating that the machine has threshed 2½ bushels.

Use a fork to winnow off the straw from the canvas, shaking out as much as possible of any wheat (or other grain) therein. This leaves a mass of small particles of straw and chaff and wheat on the sheet. Use the screen to sift off the small particles of straw, and put through a fanning mill to blow out the chaff, leaving the quantity of wheat that has been wasted. Measure this in pint measures and figure the percentage according to the following table:

Grain on blanket during 5 trips of weighing device, or 2½ bushels		*Per cent of loss*
1	pint	Less than 1
2	"	" " 1¼
3	"	" " 2
5	"	" " 3
6½	"	" " 4
8	"	" " 5
16	"	" " 10

One pint in this operation may be considered unavoidable waste; two pints poor operation, to be corrected at the earliest opportunity; and three pints or more may be considered wasteful practice, and the machine should be closed down until improvement is indicated.

The reader will observe that the test leaves no chance for argument, for it shows the wastage delivered by the stacker to the straw pile. Interest in clean threshing, developed last year as a war-time activity, is highly important likewise in times of peace.

Finally, Nature herself helps the grain grower to know whether his threshing was done well. The telltale appearance of green sprouts on the straw stack points to the presence of grain there, and a very green straw may justify rethreshing. A straw stack free from green sprouts after warm, wet weather is a fair endorsement of work well done, especially when several blanket tests during threshing were also favorable. Such combined evidence suggests the wisdom of patronizing the same thresherman again the following year.

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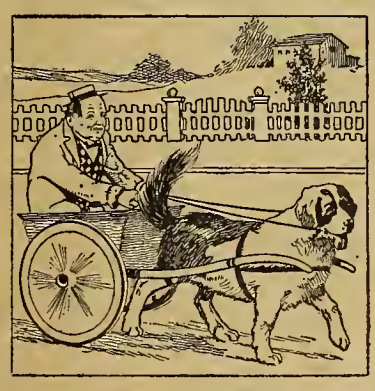
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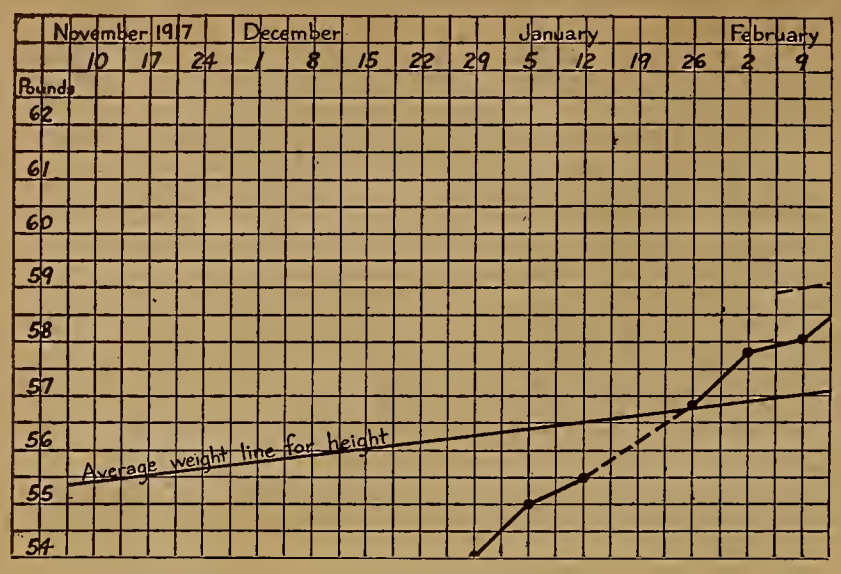
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Is YOUR Child Below Normal?

ONE out of every three children in the United States *is* below normal (10,000,000 out of 30,000,000)—retarded from one to three years in development—handicapped in the struggle for success by fatigue, nervousness, indigestion and so on.

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These are not theoretical experimental tests and methods, but based on *actual experiences over a period of years with thousands of boys and girls in every walk of life.*

THE Editor says this is the most important work undertaken by the COMPANION since it launched the Better Babies movement, which has now helped more than 300,000 babies to health and happiness. Of course it is intended to do for young children just what the Better Babies Bureau is doing for infants.

The WOMAN'S HOME COMPANION for August is now on sale at the newsstands. Take your copy home with you to-day.

WOMAN'S HOME COMPANION

Published by
THE CROWELL PUBLISHING COMPANY
Also Publishers of THE AMERICAN MAGAZINE and FARM AND FIRESIDE

Is Your Crop Worth Its Cost?

By Earl Rogers (Ohio)

FARM efficiency is a wonderfully overworked word. Therefore I am going to call it crop cost. I have had somecrop-cost surprises in the last few years, and I expect to have some more. Really, there are a big lot of us easy-going farmers who don't know what it costs us to do our work or to raise our crops. More than that, we seldom stop to think about it even.

And more than that, we know that we should think about it, and yet we don't. We say there is money in hogs or tomatoes, or potatoes or steers, or that there is not any money in horses or colts or chickens, and so on. And yet the biggest share of us merely *think* that there is or is not. We don't *know*.

Last summer I raised a small field of tomatoes for a canning factory near here. There were 2.74 acres, to be exact. I didn't guess at that. The yield was eight tons to the acre. The price was $15 a ton delivered to the factory. That is a pretty slim price, but it seemed good to us until we found that other growers were getting from $20 to $30 for the very same product, and delivered to the same company's factory.

However, the crop seemed pretty good to me. That yield is good—not extraordinary, but a little above the average. But I kept pretty close tab on the cost of that crop of tomatoes, and it left me a profit of slightly less than $10 an acre.

Some of my neighbors who follow this line of cropping have been surprised too when they have even guessed at the cost of their crop. I was. I figured my time at $3 a day, and my team at $2. That is not too high. I could not hire a man at all, and seldom a team at any price. Teams with drivers easily got $6 a day this fall. I figured my land, which was a clover sod covered with four tons of manure to the acre, along with the rent and taxes and interest, at $20. Was that too high? You wouldn't rent it for that, I'll bet.

This is just a sample. But we really are guessing too much. I have heard some pretty substantial farmers tell me that if one started to figure out what a crop or stock cost they would be in the hole about every year.

Now, I wonder? These men are older farmers than I am. Lots of them haven't made the money I have, and some of them have. But a crop, or your stock, ought to pay. Surely a farmer can't give his time for nothing. He must have wages and a profit that will pay interest. If he doesn't have he is making mistakes somewhere.

We are just starting out on our first farm. Have had two years of it. We never had a dollar handed to us or heired anything. We *have* to know what we are doing. We can't afford to make mistakes blindly.

Maybe that is why some farmers do not worry about what their products cost—they didn't dig out their farm or their money themselves, and since they've got enough to get along on they don't need t worry.

Anyway, we have just one cow so fa She pays about 40 cents a day above he feed cost. We know that. It is a con venience to have her of course, and that i worth something. But I am not countin conveniences; I can't afford to. Ou chickens will pay. We know what the eat and what they cost.

Do you know what your cows are doing Have you even guessed? Are you eve wondering?

I saw one of my neighbors with fou good Guernseys yesterday who voluntarily said that he didn't know whether the paid him or not. He didn't keep track He had 'em, fed 'em, and milked 'em and that's all he knew.



"Are those eggs strictly fresh?"
"Yes, madam. They are better than fresh, for they were really not due here until to-morrow."

But when you go to keeping track of th whole farm and its products you wil have to take into consideration a lot o living from the farm in the shape o vegetables for the table. Also, the hous rent and fuel must be divided among th different products of the farm. That wil make some difference. Our house with furnace heat would rent for $15 in ou town, and fuel that usually can be got out o our woods is worth probably $50 a year The use of rigs to travel with when we wis is worth something too. These things hav to be counted in.

But try to figure what things cost you You will have a lot more fun and interes in your work, and save or make som money.

If you don't know the cost of producin your crops, certainly you don't kno whether or not they are profitable. Per haps some of your animals are boarders and some of your crops liabilities instea of assets. Are you living on your labo income or merely on the interest on you investment? Of course, a farmer ha other things to do besides keeping book but many farmers could spend a litt more time with a pad and pencil to goo advantage.

Try to figure the cost of doing thin on your farm. It will be very interestin and likely to be quite profitable to yo as well.

Do You Need a Farmhand?

IF YOU need a good helper on your farm, write to me at 381 Fourth Avenue, New York City, and I will put you in touch with the man in your State who is paid by the Government to help you find just the farmhand you want. THE EDITOR.

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Crops I Grew

[CONTINUED FROM PAGE 6]

wpea stubble not planted. This was e field upon which the ton of limestone r acre had been put. I had my man disk s field thoroughly, and then harrow it h the spike-tooth and roll it with the ge roller. Every week it was harrowed till e first of July, when the sweet-clover d was sowed and harrowed in, the seed ving been inoculated with culture. Re-mber this field had had but one crop cowpeas, 400 pounds of acid phosphate 0 with the peas the year before and 200 h the clover seed), and one ton of estone, and that it was worn-out land. October the sweet clover was 18 inches h and ready for pasture.

"We carried the hogs along on woods sture, and purchased corn till the middle July, and then saw that they were cost- too much. Following the regular ation we had 10 acres of cowpeas.

"Here was the crop to go with the ripe and vetch, and to carry the hogs on in late summer. My theory of rotation adened. It now looked like this: ybeans for hay and cowpeas for hog sture; soybean and pea stubble sowed rye and vetch, pastured in the fall and ing and hogged off in the summer; rye d vetch field fall-plowed for corn the xt year, the corn stubble going into oats d clover the spring following. Lime-ne goes on before clover is sowed, and osphate goes on all crops.

Figures for First Successful Year

"Now for the figures on this first year t might be called successful:

e Jersey heifer	$60.00
am, one-half production	70.00
o calves	22.00
gs, red oak, for lumber	75.00
s the 40 hogs, net	540.00
	$767.00

Expenses were as follows:

ges of man	$390.00
d—clover, alfalfa, bean	60.00
tilizer, lime, etc	60.00
kes	62.40
	$572.40

There remained for the owner, as the returns for the year, $193.60, returned the farm in improvements.

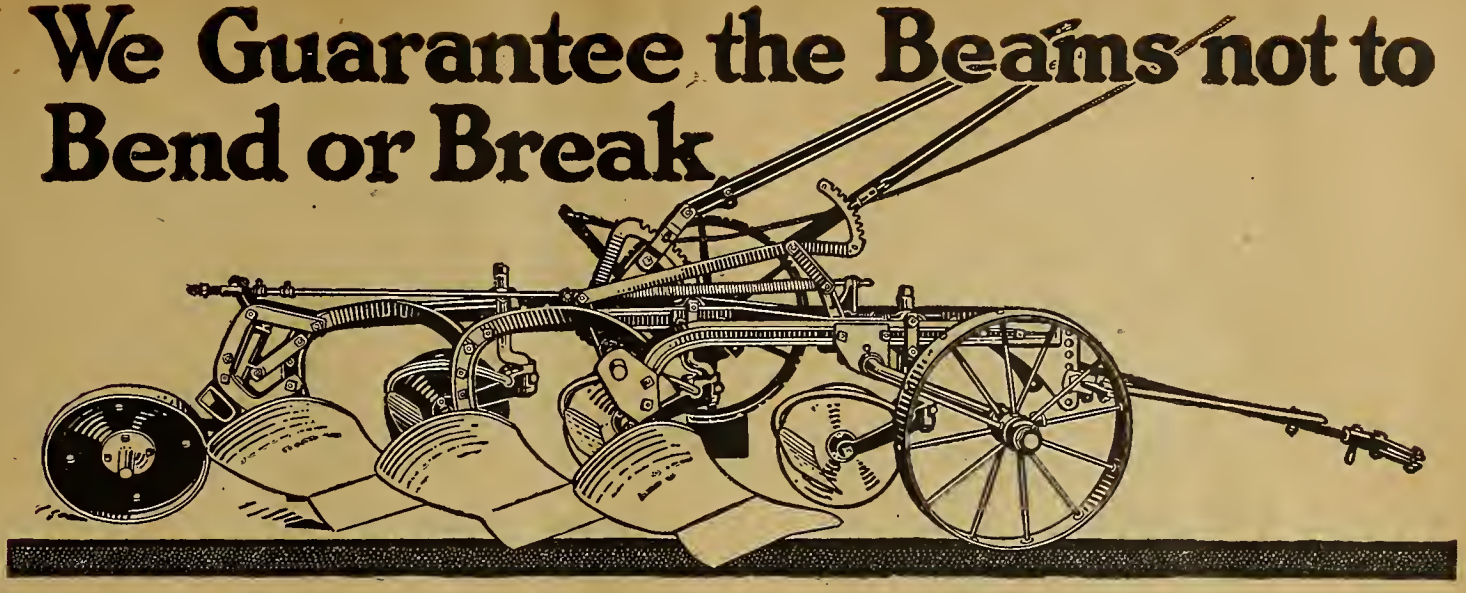
"The experiment now stands about this y: I have 160 acres of land divided as lows: 100 acres tillable, 35 acres rough sture, 15 acres wood lot, and 10 acres ildings and orchards. The 100 acres of able land is broken by ravines so that ne fields are as small as four acres, and ne larger than 20 acres. Nearly all the all fields are now in sweet clover or alfa, sweet clover sowed first to get the und in condition and then followed by alfa. The 80 acres of larger fields are ated about as follows: 10 acres cow-as hogged off, 10 acres soybeans cut for y, 20 acres rye and vetch pastured, 20 es corn on rye and vetch stubble, 20 es in oats and clover. In this war year ave put in wheat in place of oats on acres, plowing under clover sod.

"I am trying to run the place as a one-an farm. Crops are planned to furnish rk throughout the year for one man. e sow rye, vetch, and wheat in the fall, d fall-plow our rye and vetch stubble corn the next spring. We sow oats and ver in March, plant corn in early May, ybeans in late May, and cowpeas in e May and early June, usually finding ne during the planting of the two later ps to harrow and cultivate the corn. ybeans are cultivated twice, if possible. wpeas are not cultivated. We now sture the rye and vetch early, then turn gs on alfalfa, changing later to ripe rye d cowpeas. Corn is cut and shredded, d oat straw saved for roughage. The ood sows are carried through the winter soybeans fed in the hay with a little rn and middlings. Calves are carried on alfa and soybean hay.

"To sum up, the old farm that I bought $29 an acre is now easily worth twice at. All the field will grow any legume p or 50 bushels of corn in an average ar. Most fields are tiled; fences rebuilt, stly with cement posts. The farm, er the first three years, has furnished e man working on it a better living than could have made in town, and has given e owner enough extra to make the im-ovements and has doubled its value.

"So I think you will find that building the soil really pays. It certainly paid ."

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JOHN DEERE TRACTOR PLOW

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John Deere Quick Detachable Shares—the kind you get when you buy a John Deere Tractor Plow—wear exceptionally well and are easy to keep close-fitting. Loosen one nut to remove the share; tighten the same nut and the share is on *tight.*

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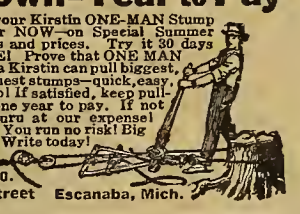
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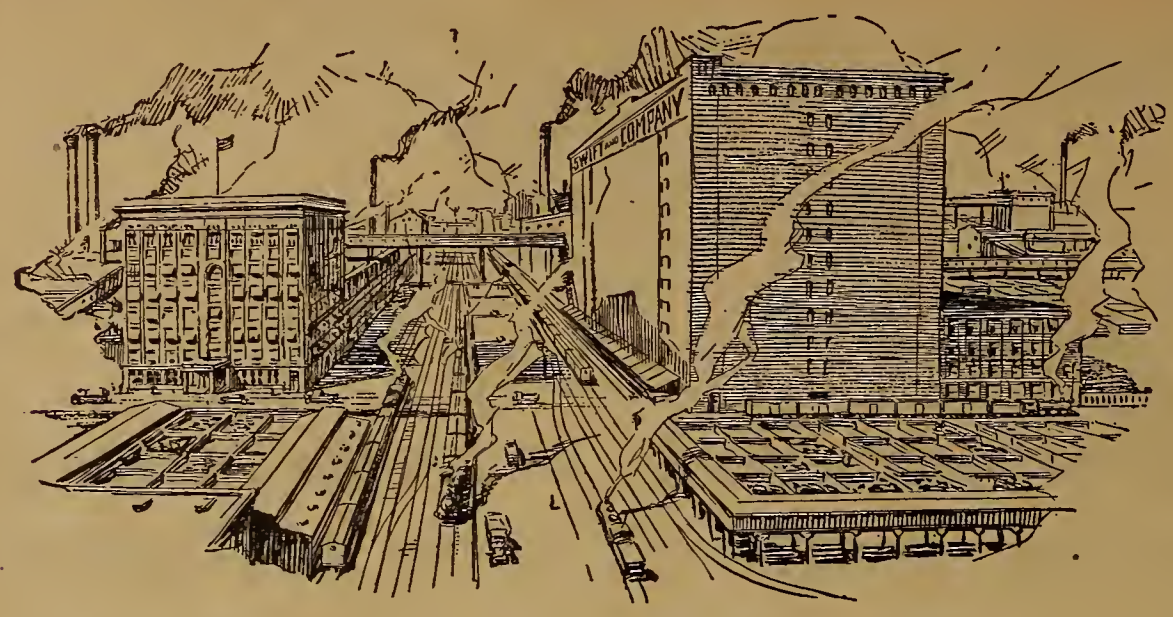


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Suppose you are the manager. You know that more meat is eaten in cold weather. A cold snap begins suddenly, butcher shops enjoy a thriving trade and call for meat. The rush of orders uses up your stocks. Competition among buyers sends the price up.

The next winter, when you are expecting the usual good demand along comes the influenza epidemic and people stop eating meat, leaving a big lot of perishable food on hand!

What would you have done then, if you had been managing Swift & Company? Of course you would have had to reduce prices to get rid of the meat—and taken a loss.

Demand is the queerest thing in the world.

No one ever has put his finger on it. Weather, fashion, business, all control men's appetites, and they buy what they want to eat.

These touches and flurries in different parts of the country cause the price to bob up and down like a cork and bait pulled by an excited fish.

After operating Swift & Company you would see how the public appetite for meat controls the price of live and dressed beef. You would find that the packer doesn't like these fluctuations any better than you do, and that he is powerless to stop them.

You would also find that he has to use the keenest judgment and the best of management to get his profit of a fraction of a cent per pound.

Swift & Company, U. S. A.

Founded 1868

A nation-wide organization owned by more than 25,000 shareholders

Things Fake Salesmen Will Tell You

[CONTINUED FROM PAGE 8]

The bonds are the work of men at th head of certain so-called "securities companies.

Should you buy a certain company stock the salesman will give you one these bonds, promising to take the stoc back after a specified period for twice th sum you paid for it, provided notice given within certain dates that you wis to have him do so. As far as can be asce tained one of these men has given suc guarantees on something over a millio dollars of this stock. A good part of the will fall due around the end of this yea What will happen to the promoter the unless his efforts to advance the mark price of the stock are more successful tha they have so far been, can be conjecture

All the assets back of them consist securities in this man's own promotio which are not worth what he is chargi for them, let alone double the price which he sells them.

Through one of his companies this ma has, in rapid succession, promoted number of stock-selling schemes—o with a $15,000,000 capital, He has be playing this game now for more than fo years, and yet not one of his compani is on a basis where it can earn a divide legitimately.

He publishes a house organ. That another earmark of the get-rich-qui promoter. In such a publication they c romance at will about how easy it is earn fabulous profits on their stocks.

When this man took over a certa manufacturing company it was an eg shell concern, occupying but tempora quarters. Its former promoter had leave the State because the enactment a Blue Sky Law made it uncomfortab for him to remain. A small matter li this, however, failed to restrain the mast bubble blower. He immediately increas the capitalization of the company seve hundred thousand dollars, and wrote his 30,000 clients that it had an equipme "which means an earning capacity one per cent per month," and talked the stock being "worth $60 per share l fore the close of the present year." Th was in 1918, and that year has passed ir history without the company stock bei worth anything like $60 a share, or ev the price it cost investors.

Lately this man has begun anotl drive on investors on the strength of contract with a certain legitimate a independent company not financially terested in his enterprises. This contra according to his version, will mean m than $50,000,000 business for his co pany. But he needs more capital to p vide the facilities to take charge of t contract. The pirates of promotion ways have an excuse for extracting m money from the public. Let us exam this excuse in the light of this ma utterances. As far back as 1915 he wr to a man in Baltimore:

"In a few days you will receive announcement that will be sent to clients and prospective ones regardin contract which has just been closed the company whereby they have s their entire output to a responsible j bing house, that means a profit of $1,5 000 a year, or 150 per cent on the capit zation." The promise failed.

The simon-pure brother of this b man is a man behind another fake bo He "guarantees" the holders of th "bonds" a certain per cent from all sale his "product" until the bond is paid in f but of course he does not guarantee production. The credulous investor is aware of the fact that he makes m money from commissions from the sal stock than he ever expects to receive dividends.

His methods and gross exaggerat offer an insight into the operations of bogy man's mind. Could one think feel as he does when he baits his hool catch the suckers, one would prob be as much amused as he must be whe says in a falsetto tone of sincerity:

"I have told you from the first th cared nothing for a profit for myself u I have made good."

He even makes a strong point in his erature" of the fact that his company s down work on Sunday.

Thus works the financial bogy r You can tell them best by their g exaggerations. Keep out of their clut or you will have less cash than you before.



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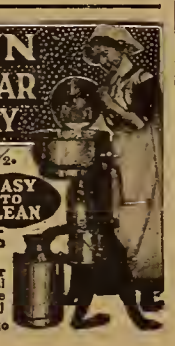
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There's Money for You in Sheep

By W. L. Nelson

WE KNOW that our ancestors, clear back to the beginning of the world almost, raised sheep. They ...t keep a flock because it looked nice on the front lawn, nor because it was fashion; they raised sheep because they ...d that they could make a good living . Farmers who are in the same business ...ay are doing just like their ancestors, those who have not yet discovered the ...ibilities of the farm flock have a sur... in store for them when they start to ...stigate.

...ere is the record of a young farmer who ...ne year made 116 per cent profit from head of ewes. One item shows 794 ...ds of wool at 13½ cents a pound—13½ cents, not 60 or 70. That was in ..., just ten years ago. Who will say



... with proper management there is ...er present conditions no money in the ...p business? The price pendulum has ...ng a long way from where it was back ...ne dark days when some shipments of ...p actually failed to pay freight and ...mission charges. The term "mutton-...," as applied to a man, was then one ...erision, but it might now be counted a ...pliment.

...ew sheepmen were able to foresee the ...t wool demand of to-day. The result ...at we had in the United States at the ...nning of 1918, not 64,000,000 sheep—...mber once reached—but an average of ... a million sheep to each State. No ...der that Red Cross chapters were ...ng for yarn to knit into sweaters for soldiers; no wonder that owners of ...tered flocks were, almost without ex...ion, sold out of surplus stock early in season; no wonder that some persons ...licted $1 a pound for wool. A great ...ght in Australia, an unusually un...rable winter and spring on the Western ...es of our own country a year ago, and war have all tended to bring about ...ent conditions in the sheep trade.

...ut abnormal conditions are not needed ...make profitable a flock of well-bred ...p on the average farm. Here is the ... one authority puts it:

Sheep will produce twice as much as other class of live stock raised on any ...al area that will support both."

...ruly, right now, wool is "velvet," but sheepman does not depend upon wool ...e for profit. The sheep is one of the ...t efficient meat-producing animals on farm. A table compiled from many ...eriment station reports shows grain ...uired for 100 pounds' gain, dry-lot ...ling, as follows:

	Cattle		*Hogs*	*Sheep*	
	Pounds Grain	*Pounds Hay*	*Pounds Grain*	*Pounds Grain*	*Pounds Hay*
...	1,080	457	500	420	458
...	....	...	421	331	595
ey...	914	...	446	305	...
...			452	549	Past'r'd
ed (with ots or sil-...e)	712	572	359	370	382
ed...	953	292	431	326	422
verage...	914	440	430	383	464

...n enthusiastic sheepman says: "While ...y 24 pounds of dry grain are required ...make one pound of mutton, we must ...e 64 pounds to produce one pound of ...f in the slaughter house." This same ...n continues: "We can purchase six ...s for the price of one cow. Ewes well ...ed for will average a lamb crop of 115 to 120 per cent, while the calf crop runs from 75 to 90 per cent. We can count on from $12.50 to $14.00 per hundredweight for the lambs when they are ready to go. The wool will pay the cost of keeping the ewes. So you see why I am so strong for the sheep."

The care of lambs was never as important as it is this spring, and March and April are the months in which the greatest amount of care is required. Neglect then means loss. Care, on the other hand, brings the largest compensation. Next to the time spent in testing seed corn, the hour devoted to looking after the ewe that is lambing may bring the largest returns of any labor on the farm.

There should also be advance preparation looking to the lambing period. If the ewes can have fresh winter pastures, such as wheat or rye, it gives a healthy tone to the system and increases the milk flow. It will also pay to feed ewes about half a pound of grain with some silage, or a little bran and oil cake, for a few weeks before lambing, reducing the grain just in advance of the lambing period.

We have spoken of winter pasture for the ewes. It is also true that the young lamb will often begin to eat grain at an earlier age if provided with rye or wheat pasture. Ordinarily, when thrifty, healthy lambs are ten days or two weeks old they begin nibbling at the hay or other roughage that has been provided for the mother sheep. It is then that the experienced shepherd provides separate creeps, or pens, for the little woollies. In these pens are troughs in which small quantities of corn chop, bran, and oil meal are placed. With feed of this kind and with plenty of mother's milk the lamb goes right on growing and never loses its "baby fat."

At lambing time it pays from day to day to pick out the ewes that are the most advanced, and to separate them from the rest of the flock. If the weather is extremely cold it is a fine thing to put them in a building in which there is a stove. It will be better, too, if the ewes can be separated into lots of only five or six each. This means that when a lamb is dropped it cannot stray very far away from its mother. With a small flock and where room is sufficient it will pay to take another step and place the newly dropped lamb with its mother in a single pen for several days. When this is done there is rarely ever any trouble in getting the ewe to own her offspring. Occasionally, though, this trouble must be contended with. Drawing some milk from the udder and rubbing this over the lamb will often result in the mother's owning it. This is on the same principle that the ewe that has lost her own lamb, and that is slow to adopt another, may, in most instances, be induced to do so by removing the skin of the dead lamb and temporarily covering the living lamb with it. After other means have failed, we have seen a contrary ewe made to claim her lamb merely by the shepherd's commanding his collie to get over and lie down in the sheep pen. To tie "Towser" in one corner of the pen would have the same effect. In case of lambs born in the range or in the open there is seldom any difficulty to get the mother ewe to own her offspring.

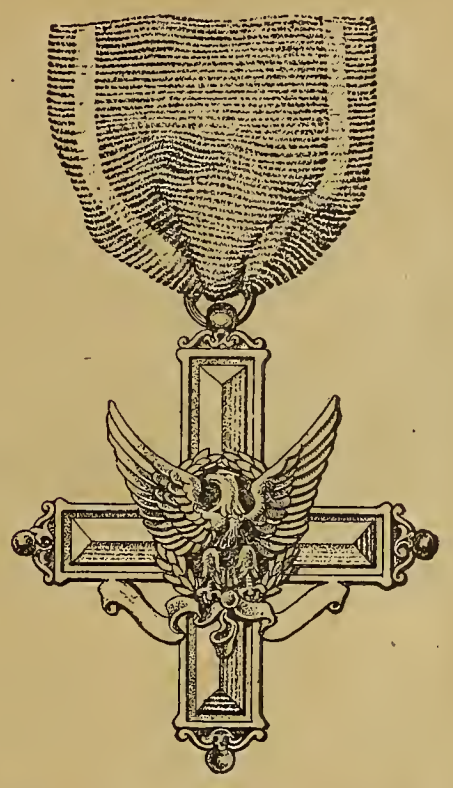
Even with the best of care we occasionally find a chilled lamb. In this case a bath in fairly hot water, followed by a dry

[CONTINUED ON PAGE 37]

Why Don't You Ask Me?

IF YOU want to ask any questions about your live stock—hogs, cattle, sheep, and horses—either as to buying, breeding, feeding, or marketing, write to me at 381 Fourth Avenue, New York City, and we will see that you get what you want from the most reliable source of information there is. Be sure to give us full details.

THE EDITOR.



DE LAVAL

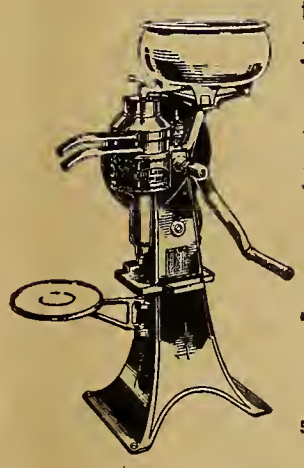
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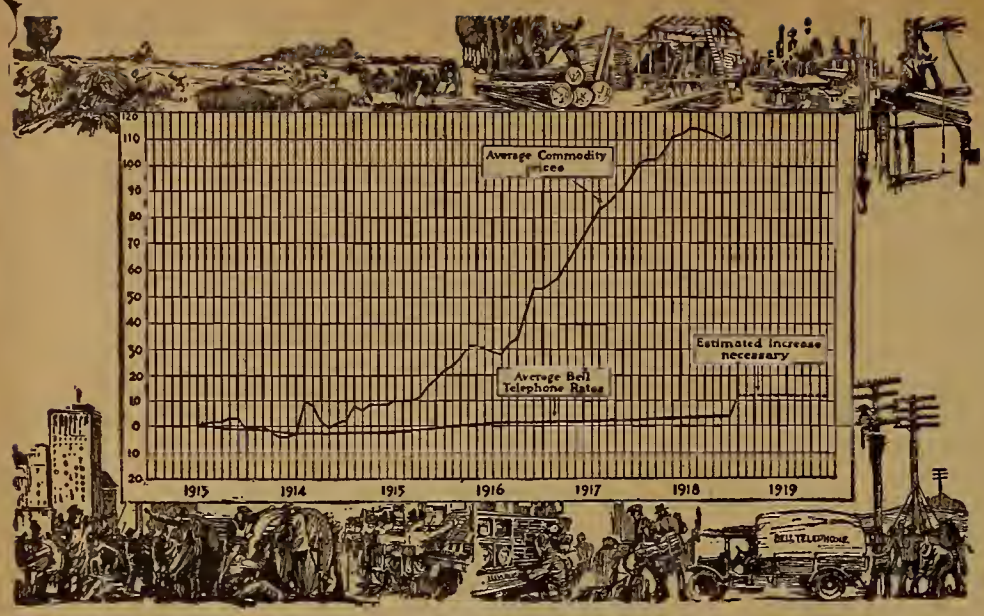
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Is the amount you receive satisfactory?

If not, let us explain, without obligation to you, our unusual money-making proposition.

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A graphic picture of the high cost of doing business is shown by the rise in a long list of commodity prices during the past five strenuous years.

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The fact is, the increase in the cost of commodities has resulted in what is equal to a decrease in telephone rates. In other words: The dollar which was spent for the telephone has bought more than twice as much as the dollar spent for the commodity.

The activities of reconstruction which are now upon the nation have put a great burden upon the telephone. This condition has made necessary an advance in telephone rates.

This advance does not exceed an average of eight per cent; almost negligible as compared with the advances in other lines of industry, yet enough to cover the increase in the cost of operation.

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AMERICAN TELEPHONE AND TELEGRAPH COMPANY
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One Policy *One System* *Universal Service*

Victory Home Food Drier

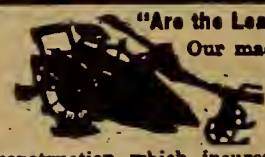


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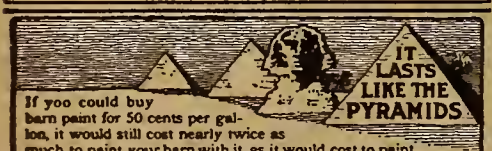
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Prohibition—And Your Farm

[CONTINUED FROM PAGE 5]

from brewery machinery to canning machinery. We're making commercial cannery machinery right now. That's what I'm doing up here—selling it."

The use of rye for alcoholic liquors is insignificant as compared with the expanding demand for this crop for other purposes. During the year ending June 30, 1917, the use of rye for alcoholic liquors was less than 3,000,000 bushels, as compared with rye production in 1916 of 48,862,000 bushels.

This works out a less than eight per cent use of the crop for this purpose, but the crop has been increasing rapidly, the yearly average for the last five years being 60,000,000 bushels as against 35,000,000 bushels in the preceding five years. These "lifeless" figures ought to convince the most pessimistic that the discontinuance of rye in the making of whisky will make hardly a ripple in the upward current of production of this crop.

Corn? So much has been said about corn whisky and the tremendous consumption of this fluid, that one wonders what the deuce we're going to do with the grain after we stop drinking its juice. This is another case of the wish being father to the thought in the "wet" mind.

Less than two per cent of our corn crop was used for beer and whisky! The corn crop of 1916 was 2,566,927,000 bushels, the crop of 1917 was 3,065,233,000 bushels, or 500,000,000 bushels increase in one year. The ten to fifty million bushels used for alcoholic liquors aren't going to bother the American farmer. We lose more corn than that from weevil and smut and wireworm and a few other pests which we have with us always. And the shutting-off of this amount from the distilleries will mean only the diverting of it into the feed trough on the farm.

The distilleries *have* taken nearly 10 per cent of the corn which we marketed, but the farmer should worry! Europe will take more, and he'll have to grow more to fill Europe's order and his program for increased live-stock production.

Then comes the voice from the vineyards. Wine growers have been on the anxious seat, and will be kept there just as long as pro-alcoholic preachings can hold them down to it. California, for instance, produces something like 250,000 tons of wine and table grapes, valued at $4,000,000 in the raw, at $8,000,000 when used for wine and the like. What will become of these investments in vineyards?

Market them as table grapes, one suggests; but this market has its limitations. And the wine grapes of California alone yield approximately 40,000 tons of sugar a year, which at some sugar quotations which have been obtained in recent months have a value of about $8,000,000.

No stretch of 200,000 acres of wine grapes can be converted overnight into something else. This is a problem in gradual economic evolution. But in so short a time as a few months new uses for this crop are suggesting themselves.

"There is the possibility of converting some of these vineyards into currant vineyards," say the experts in the Federal Department of Agriculture. "Currant grapes ripen very early, and would be ready for curing in the dry vine districts before the fall rains begin. Their yield, under favorable conditions, is relatively high, running from four to eight tons to the acre.

"There is an established market in the United States for about 30,000,000 pounds of dried currants a year. That was the average quantity annually imported prior to the beginning of the European war. The demand for them has become thoroughly fixed, and may be fairly depended upon. From 8,000 to 10,000 acres of grapes would be necessary to meet this demand, heretofore supplied from abroad. The *modus operandi* consists of grafting the currant grape on phylloxera-resistant grape stocks already planted and bearing.

There is another possible outlet for the yield of these wine vineyards—grape syrups. The University of California has pointed out that the manufacture of syrups could be accomplished with comparatively little expense for special equipment, as some of the wineries already have syrup-making machinery, and much of the equipment used in wine-making is also used in syrup-making.

"A table syrup produced from grapes necessarily would be a high-priced syrup," the Department investigators tell us.

All of which might offer invaluabl material for the calamity howlers followin the funeral train of John Barleycorn, wei it not for the vivid fact that whenev California has something good, and know it, no antiquated groundless prejudice c lack of appreciation for it ever keeps he from shoving that something straight t its *ultima thule*. And now watch them pu across grape syrups for table and cannin use! Now as to soft drinks.

Here are a few simple facts about ou soft-drink industry:

The annual consumption of bottled sof drinks in the United States *prior to wa restrictions in production* is estimated a about 3,000,000,000 bottles. Over 10,00 establishments, employing about 75,00 people, are engaged bottling these product

Hop acreages must of course pass wit the passing of beer. Then, asks the pr alcoholic, what is to become of these in vestments and the investments in you hop kilns? Well, in California, for exampl some of the largest hop growers hav planted fruit between the rows of ho vines, just as peaches are often placed a fillers in apple orchards to yield an incom while the apple trees are approaching th productive stage of their career. Whe this stage is reached the peaches are take out. By the same token, hop vines ar being taken out from the fruit planting In some sections of New York State, an in certain parts of the Pacific Northwes hop kilns have been converted into fru driers, and plants for drying vegetabl other than root crops. The conversion the hop kiln into a fruit or vegetable dryin plant depends for its practicality upon th nearness of a good supply of fruit to the plants.

If you farmers of this country were to b asked individually and collectively wh feature of the whisky business concern you most, I venture the assertion that yo would ignore the marketing problems corn, rye, barley, hops, grapes, and th like, and strike on a key which up to th present has not been sounded in th article. Never have I met a farmer in "wet" territory whose greatest conce was not the problem of his labor supply.

Labor at best is an elusive quanti these days; thrice fortunate is that farm who can find good labor and then *ke* it. Witness the great efforts in this dire tion exemplified in the building of comfor able tenant houses, the allowance of garde cow, and a pig or two to labor living on t place. The great ambition of the real far er is to get married labor and keep t laborer and his family contented. I encourages marriage among his unmarri labor.

"Because," he says, "when a m marries he is likely to stay. He saves a works steadily. He goes to town less often

"Goes to town!" What a store of omino possibilities in this phrase—*if that town wet!* The single farmhand who drin must go to town every so often. Mo often than not he is not a steady drink but a periodical one. He must indulge his sporadic tear, and when the cravi for this takes hold of him he disappears usually in the midst of the busiest seas on the farm, when the operator can le afford to lose his services.

"Take whisky away and my troub would be over," said a farmer with wrinkled brow; "but I can't make out long as my labor can get to it. It ru them, and it will ruin me. And yet towns are yelling that if we run them business will stagnate and the towns up. As though every town in this cour won't stand or fall with the farmers!

Prohibition won't supply farm lab overnight, nor make it sober, but it'll *be* to do these things. It won't empty alm houses, the jails and asylums, and redu the farmer's taxes for their support, ov night, but the start has been made.

Prohibition to-day is another form Liberty bond—the older it grows greater its earning power.

NOTE: This article was written with idea that the war-time ban on the manuf ture of beer and wine would not be revok and that prohibition would take effect J 1, 1919, instead of January 1, 1920, wh the Constitutional Amendment becomes fective. If President Wilson's suggest that the ban be removed from beer and w manufacture is sustained by Congress, wets will have a breathing spell until J uary 1st.

THE EDITOR

Pure-Bred or Scrub—Which?

By P. C. Henry

MY EXPERIENCE has convinced me that pure-bred poultry stock is the best for the general farmer. By pure-bred poultry I do not mean that average farmer should seek to become poultry fancier, devoting much of his e to the mating and rearing of fancy ltry for exhibition purposes. I simply an that he should keep one variety of ltry on the farm, and that one variety uld be pure-bred stock instead of all ds and colors of mongrels.

Here are my reasons why the keeping of e-bred poultry will bring in the most enue: Let us say that the type selected he Plymouth Rock or the Rhode Island l, as being the best variety for the rage farm. It is an easy matter to keep laying hens. A good laying strain will duce more eggs during the winter than ngrel stock, and the winter egg is the that pays best. Again, having pure-d poultry all of one kind is, in itself, a ding advertisement for many people sing along the public highway, who will see the flock, stop, and inquire the price of both eggs and young stock. We do not charge fancy prices for our eggs or young stock—simply twice as much as we could get on our local market for mongrel birds and eggs from ordinary stock.

Many farmers cannot understand that it will be greatly to their advantage to dispose of "sixteen" varieties of barnyard fowl and keep but one variety, and that one variety as pure as possible. Everyone understands why well-bred horses and other pure-bred stock are brought into the neighborhood by wide-awake farmers; yet when it comes to the relatively small poultry stock the average farmer cannot see the necessity for keeping pure-bred fowl. It costs just as much to feed mongrel stock as pure-bred stock; and, while you could not sell a setting of eggs from mixed barnyard fowl, you will be able to sell many settings of eggs from one variety if they are kept relatively pure.

But how can the farmer keep his stock pure? Here is our method: We have selected the Rhode Island Reds as the best all-purpose poultry. The White Leghorns may lay a few more eggs in a year, but when one sells 50 or 100 old hens of the White Leghorn variety very little is received, as they seldom weigh over three pounds. With the Rhode Island Reds it is quite different. They are almost the equal of the Leghorns as layers (some authorities say they are fully the equal), and when we sell a batch of old hens we receive over twice as much. We keep nothing but this one variety, and every second year we secure several settings from some reliable breeder of Rhode Island Reds, and from the number of males raised we select the best male birds to head our flock. Thus we keep our flock relatively pure, and are able to sell many eggs for hatching and young stock.

NOTE: Do you agree with the above article as to methods and as to superiority of breeds? If not, write us, telling your ideas or methods. THE EDITOR.

We'll Answer Your Question

IF THERE is anything you want to know about fruits and vegetables on your place, no matter how large or how small a grower you may be, and no matter what your problem is, if you will write to me at 381 Fourth Avenue, New York City, I will have the best authority there is on your particular question help you.

THE EDITOR.

There's Money for You in Sheep

[CONTINUED FROM PAGE 35]

rub, and a "tummie" full of the mother 's milk, are pretty sure to bring the ngster around all right. Sometimes, n one cause or another, a young lamb st be fed by hand. Cow's milk, diluted fifth and fed quite warm, gives good lts, provided bottles and nipples are t sweet and clean.

When a lamb is dropped it is always a d plan to draw a little milk from the 's udder to make sure that there is no truction to the flow. Again, one will asionally find that the ewe is giving re milk than the lamb can use. In such es, the surplus should be milked out.

As to the treatment of the ewe the first days after she gives birth to a lamb, a st successful breeder of sheep says:

"I increase the root and bran ration ne, but at first give no grain. Later I dually increase the feed until I am feed- one-quarter pound of bran, one-quar- pound of oats, one-third pound of corn, l one-quarter pound of roots (turnips). lso have a few acres of Dwarf Essex e on which to finish the lambs in con- tion with this ration. However, the thers are not allowed to run on the rape."

The best time for lambs to come depends ch upon climatic conditions and how sheepman is prepared to care for his k. In the latitude of Missouri, March is avorite lambing month on many farms. th later lambs, though, the loss is less, l the feed bill is decreased.

t is desirable to have pure-bred lambs ne early, as the added price that they ng pays well for the additional feed and e required. The early lamb gets a good, ng start before fly time, and is ready market in June, when prices are gener- better than in July. This leads us to subject of marketing. Lambs are like ches: when "ripe" they've got to go. e day that the milk fat begins to slip, s begins. Weaning is not necessary in case of lambs that are to go direct to rket, but where weaning is practiced cked corn fed for a few weeks will pay. to gain, the lamb that puts on three nds a month during June, July, and gust is doing well.

What we have said does not altogether apply to the winter lamb, or so-called "hothouse lamb," the production of which represents a rather specialized business, and one in which success is not attainable without closest attention to all details. However, previous to the opening of the war the profit resulting from the production of winter lambs was sufficient to justify the extra attention and expense required. The Dorset, grade or pure-bred, is particularly adaptable to the production of winter lambs, which should come in November or December. This means mating during May, June, or July.

We have said that there is money in the farm flock. This is especially true if the sheep are pure-bred. For instance, last spring Tom Groves of Tipton, Missouri, had a flock of 35 ewes. In February of this year he sold the wool for $344.68. In addition he has, during the last twelve months, sold $900 worth of sheep, and still has 29 sheep left.

Wool is high; meat is in demand; dog hair is bringing the same old price. Many a farmer ought to take the advice of Josh Billings:

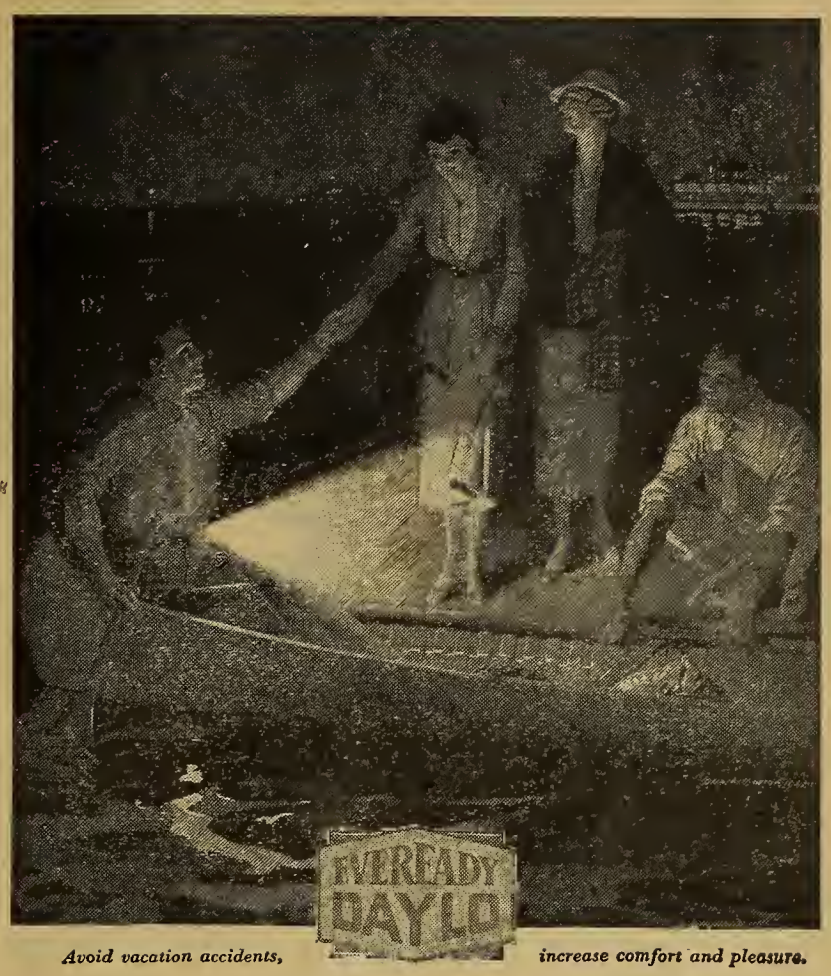
"Go into the dog-swapping business, and stay in it just as long as you can swap two dogs for one."

Do You Get What You Want?

IF YOU see anything in FARM AND FIRESIDE that interests you but doesn't give you as complete information as you want, write to me at 381 Fourth Avenue, New York City, and I will see that you get exactly what you want from the best authority there is in the country.

THE EDITOR.

Announcing the new **EVEREADY** LIBERTY Daylo



Avoid vacation accidents, increase comfort and pleasure.

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IT is named the Liberty because it leaves the hands free—can be clipped over your belt, or slipped over a button. Get one NOW for your vacation. Two handsome styles, gun metal and full nickel, fitted with a long-lived Tungsten battery.



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land similar to that which through many years has averaged from 20 to 45 bushels of wheat to the acre. Hundreds of cases are on record where in Western Canada a single crop has paid the cost of land and production. The Governments of the Dominion and Provinces of Manitoba, Saskatchewan and Alberta want the farmer to prosper, and extend every possible encouragement and help to

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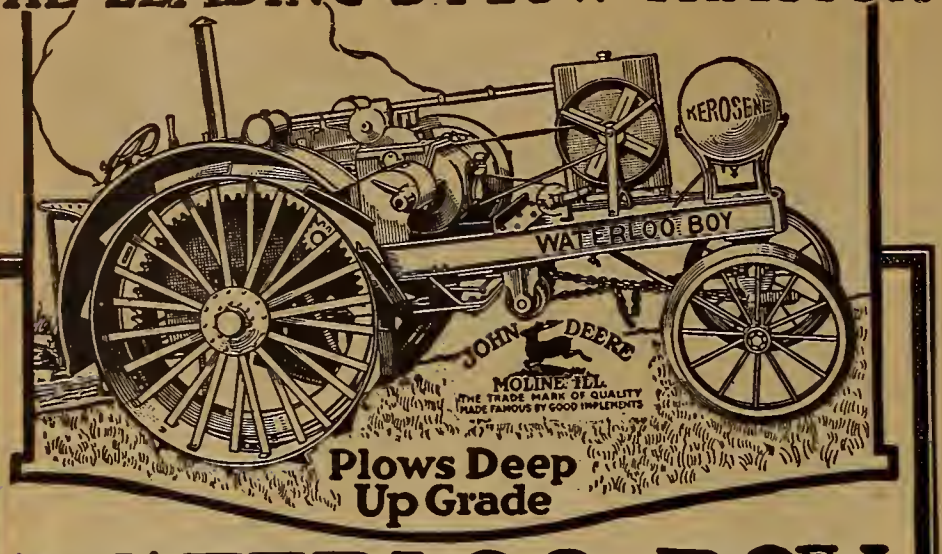
Though Western Canada offers land at such low figures, the high prices of grain, cattle, sheep and hogs will remain.

Loans for the purchase of stock may be had at low interest; there are good shipping facilities; best of markets; free schools; churches; splendid climate; low taxation (none on improvements).

For particulars as to location of lands for sale, maps, illustrated literature, reduced railway rates, etc., apply to Supt. of Immigration, Ottawa, Can., or F. A. HARRISON, 210 North Third St., Harrisburg, Pa. O. G. RUTLEDGE, 301 E. Genesee St., Syracuse, N. Y. W. S. NETHERY, Interurban Bldg., Columbus, O. C. J. BROUGHTON, 112 W. Adams St., Chicago, Ill. GEORGE A. HALL, 123 Second St., Milwaukee, Wis. R. A. GARRETT, 311 Jackson St., St. Paul, Minn. Canadian Gov't Agents

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Waterloo Boy reserve power insures a smooth, even job of plowing in rolling land or varying soil conditions. Its two-speed motor, 2¼ and 3 miles per hour, enables you to turn the furrow at varying speed for best results in any kind of soil; quick change of speed and 12-foot turning radius permits close work in irregular fields and at corners.

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because it is the right size for the widest range of profitable operation—supplies ample power for the heavy work, economical power for the lighter work—available for all work. Many Waterloo Boy owners are keeping their tractors busy most of the year—at draw bar or belt.

Simplified construction makes it easy to operate; equipped with Hyatt roller bearings, dependable ignition device, patented fuel saving kerosene burner, automatic lubricating system and other features which insure many years' service at minimum up-keep cost.

Our illustrated catalog, sent free on request, gives full information with many views showing Waterloo Boy efficiency on farms. Write for it.

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For 11 years Heider tractors have done every kind of traction and belt work on America's leading farms. Success built on eleven years' performance. You do not have to take a "demonstration" of one or two days as your guaranty.

Here are a few of the letters that have have come in this spring:

"Have had my Heider 3 years and have the same fibre on my engine that came on it."—Boone Lipscomb, Grapevine, Texas.

"Have had my Heider 3 years. The Friction Drive is the best thing out, it is so simple and easy to handle. The Heider is the best ever."
H. H. Gramhach, Poy Sippi, Wis.

"We have had a Heider 12-20 for two seasons; the Friction Drive for ease of handling and ease on engine and gears can't be beat."
J. J. Murray, Bad Axe, Mich.

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Clutch transmission and bevel gears all done away with. More power goes into pull—steady, flexible power as much or little as you need.

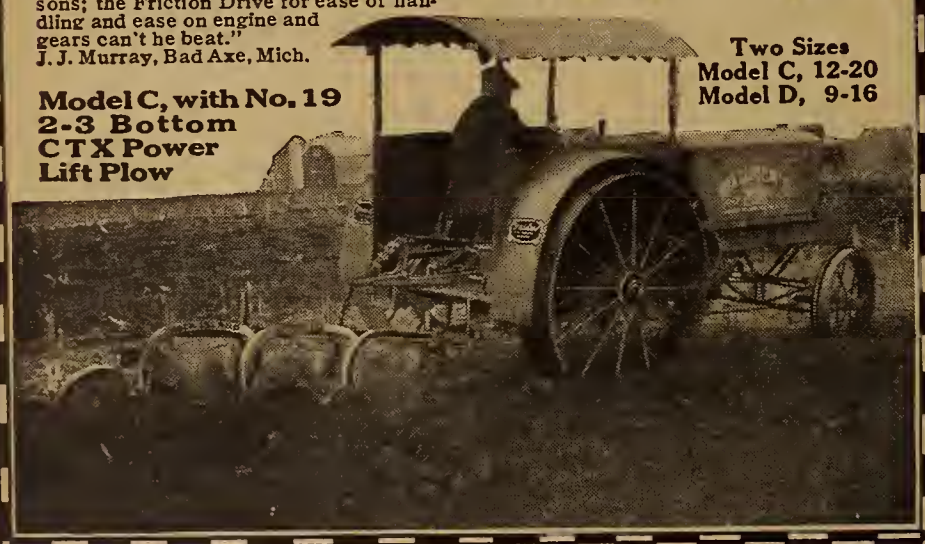
Saves fuel, saves repair expense—so easy to run that boys and girls operate Heiders.

Two sizes, 12-20 and 9-16. Write for Catalog of Heider Tractor and Rock Island Tractor Tools; the famous Rock Island Tractor Plows, 2, 3 or 4 C T X bottoms, and the Rock Island No. 38 one man Tractor Disc.

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Two Sizes
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Model C, with No. 19 2-3 Bottom C T X Power Lift Plow



Where to Find Success and Happiness

[CONTINUED FROM PAGE 7]

the cities to do their work. I pity the poor fellows shut in by brick walls, brooded over by smoke and grime; yet they can get joy out of life if their work is done honestly and well. Yet the country dweller has in his lot by far the more of joy. He is the young Adam, put in the new garden to dress it and keep it. I fear we don't realize our duties toward this garden. How many trees along the roadside have you set this year? How many weeds have you destroyed that mar roadside, lawn, or field? There is no land that can be so easily made beautiful as our America. I have seen the fairest of nearly every land, and America is the rose among them all. Nowhere else are the fields so green. Nowhere else are the woods so rich and restful. Nowhere else do the farm homes nestle down among orchards, the barns so snug and well-filled, the villages look so neat and prosperous, as here. I love our swelling hills and fertile valleys. Yet we do not do all our part. Our work is to make them more beautiful by the touch of a loving hand. Learn first to see the marring weeds, the unsightly things. Hide away ugly buildings by use of vines and shrubs. Run the mower up and down your roadsides. Widen your lawns and give a breadth of grass for a setting to your home.

Go Away Sometimes

"Eyes have we, yet we see not." We lose sight of the beauty that is about us. We lose sight of the ugly things. It is well to go away from home now and then, to see how other lands look; it may awaken in us a wise discontent, we may set to work straightening up things about our homes; it may awaken in us a new appreciation of our land and a deeper love for it.

Work, muscular work, is a blessing and honorable. But to get much profit out of it one must let his head work along with his hands. It pays right well to think. One of my men wanted to roll a stone out of a hole. He made a journey of a quarter of a mile for a chain. When he got the chain he forgot the doubletrees, and made another trip for them. There was a half-mile of walking, and three men standing waiting because only the legs were at work! The world is full of men who can't work head and hands together.

An Irishman who cuts ditches for me came one day last week to connect two tiles. He remarked before he began that I would find the depth thus and so. His memory was clear as to how the ditches had been dug. When he exposed the tiles I surveyed it, and found his ditches were half an inch different from what he had thought. That man works with head and hands. I honor him as much for his honest, intelligent, efficient work as I do the President of the United States.

To make work interesting one must think as he works, and about something connected with the work. There is where the farmer lad who has had a course in the agricultural college has the advantage. He does not turn up dead, uninteresting clay with his plow; no, he turns up the history of the world since the rocks cooled and the glaciers came. The plants all have a history to him, and a relationship. The cow is no longer "old Spot," but a half Shorthorn, and he has a resolve that her calf shall be a three-quarters blood. If he has studied to good purpose his thoughts bear fruit in action. Emerson says, "Action is the flower of thought." Thoreau advises that you be not afraid to carry out your thoughts, your ideas. If you want to do a thing that you believe right, *do it,* no matter whether your neighbors have ever done it that way or not. Maybe they will laugh at you at first. When we began, years ago, to sow alfalfa on our Ohio farm we were made all manner of sport of. We would have preferred to have had the approval of friends, but we kept on. This year we cut 300 tons of alfalfa hay, and most of our neighbors are sowing alfalfa too. It won't do to be laughed out of doing what we know is right.

Yesterday I had a carpenter hanging some farm gates. He did not know how to hang them so that they would always swing shut, or stand wide open. It is a little trick in placing the lower hinge out an inch or so. I showed him how to do it. "I would never have thought of that," he remarked. He had not learned to work and to think too. It is a delight to make a thing and have it work properly. I can imagine what pleasure the Almighty must have had in setting these worlds spinning in space, in starting the plants to growing and the fishes to swimming and the birds to flying. There was nothing to mar this pleasure, I suppose, until He had made man! Then was introduced the element of uncertainty. The Indian remarked, "White man mighty uncertain." You have all noticed that. Apply these thoughts to *yourself.*

But have I nothing to say for the girls? Yes. If blessed is the man who has found his work, thrice blessed is the woman who has found hers. There is nothing worse for a woman than to be a drone. There is nothing makes her more unhappy. Give her nothing to do, plenty to eat, and a patent-medicine man's alluring almanac, and see how soon she is a collection of mysterious ailments. Give her nothing to do, a man companion just as busy, each with a little money, and see how soon she degenerates into a silly flirt. Woman's work is different from man's. She can't drive a nail just where it ought to go; she can't master the intricacies of machinery. That may be because man made the machinery. But there are things that she can do that you can't. She can tie up bleeding fingers when she is yet only a little girl. She can soothe and bind up bleeding hearts when she is a little older. She can make a home out of a log cabin. Her gentle hand will lead you at the parting of the ways from the path that leads down to hell, toward that other country we call heaven.

I had a girl to help me in my correspondence once. She vexed me greatly by her seeming stupidity in managing the typewriter. Some little adjustment that my eight-year-old boy would have set right would block her completely. Yet her tact, her courtesy, her instinctive knowledge of men let her help me in my relations with my correspondents, helped me out of many a hole, and led me away from some serious pitfalls. So women are not such blunderers as they seem. And I for one would not like a woman I know to tell me all in one day of the blunders I have made, seen from her eyes.

There is a distinction between work and drudgery. Our women drudge too much. Some of this drudgery is necessary, it is true, but some of it can be skipped. A woman ought to get out of doors; to ride horseback, as they do in old Muskingum; to get the fresh air in her lungs, the sun in her cheeks. I don't say she should not do office work—that may be an unfortunate necessity for some of her sisters—but now, and I hope forever, woman's work is home making. There can be nothing higher than this. There can be nothing holier. She has to take us poor, blundering men, with our big appetites and big, muddy feet, and try to civilize us. I can give her a hint. If she wants to hold us chained forever to her, she should learn to know as much as she can about things we are interested in, learn to know country life outdoors as well as in. It will broaden her outlook. It will develop a side of her that too often lies dormant. And the husband may as well interest himself in his wife's work. Then he will smooth many rough places for her, make many hard places more easy.

Work, then, is the grandest thing in this world. Blessed is he who has found it. It makes strong the weak. It cheers the despondent. It takes us out where we see the sun shining, and leads us to Nature's sweet restorer—sleep. If you have the blues, try to find your work. If you are sad, work. If you are strong and boiling over with unused energies, find your work, find it quickly. Work sweetens our bread, softens our couches, clears our brains, strengthens our arms, makes homes for our fair ones and our dear ones. All honor then, to the man who works! America is full of him. He has made her great. He will keep her great. All honor, too, to her who works by your side! She has made you gentle. She has made you patient. She has kept you clean. The mothers of America, what workmen they have been!

NOTE: The second of the series of unpublished manuscripts by Joe Wing will appear in the August issue. We have been fortunate to get enough of his wonderful inspiring messages (and we got all that there were left) to give you one each month for a year and a half. THE EDITOR.

Health and the Poultry House

By P. F. Goe (Washington, D. C.)

A FEW days ago I was talking with a neighbor who has been having some trouble with roup in his flock of chickens. Some of the hens that he had been depending on as being his heaviest egg producers had died, and the disease seemed to be spreading rapidly. The fowls had free range about the farm, and from all outward appearances there seemed to be nothing that could bring about the disease. The farm has a thrifty appearance, and it is kept neat and attractive. I am sure that the roup did not arise from unclean poultry quarters, a condition that frequently brings it about, and that on this particular farm the trouble had its beginning in the poultry house. This building was a substantial one, and like all of the other buildings on the place it was well painted and kept in good repair, but it contains but one window and is too small for the present flock. In the fall this window is closed, and as a rule is not opened again until spring. The location of the house, too, is not the best, for it is near a slight depression where during wet weather water collects. The house is usually moist inside; this is especially noticable when the chickens are at roost.

If the owner would move the house out of the depression and place it on a near-by knoll or raised place, reduce the size of his flock by taking out some of the most undesirable birds before all of the good ones die, and, above all, if he would cut a large window or two on the south side, he would have no more trouble with roup, and the general condition of the flock would improve. The chickens that are now dying would live to make a profit if plenty of sunlight were allowed to enter the house and it were properly ventilated.

In selecting a site for a poultry house it is all important to select an elevation. It need not be high, but simply far enough above the level so that there is natural drainage from all sides. If the present house does not occupy such a place it will pay to have it moved, for there is always danger, in a house on a damp location, of an outbreak of disease that will be far more of a loss than would be the expense of moving. A building located on a porous, sandy soil is to be preferred to one on a clay soil that readily retains moisture. as dryness, sunlight, and, in winter, warmth, are essential to the best success; the house should face the south so the sun's rays can shine through the window.

The interior of the house should be as simple as possible, with only the necessary conveniences. The more simple it is the easier it will be to keep it clean, and the more space there will be for the chickens. Roosting platforms are becoming very popular, and they are very convenient, especially where only a few fowls are kept. The platform should be placed in the rear of the house, about three feet from the floor, and the perches placed eight or ten inches above it. A good place for nests is along the opposite wall from the door or under the platform, where they may be darkened somewhat. Several small boxes for sand, grit, beef scrap, etc., placed about the side walls, a few inches from the floor, and a watering vessel should complete the interior equipment.

This arrangement will leave the front and south wall clear so that a number of windows can be put in. There are few poultry houses that have enough southern window space. Sunlight is death to lice and mites, and in winter it furnishes considerable warmth and cheer. It promotes health and encourages exercise. Exercise is important in winter, for, as a rule, chickens are fed too much and are inclined to become fat and lazy. Such a hen will not lay or be healthy. The floor of the poultry house should be covered with clean straw and the chickens encouraged to scratch it. Feed scattered in the straw will not be wasted, for the hens will scratch it out.

How's Your Poultry Getting On?

HOW are your chickens doing? If there is anything about the flock that puzzles you, either as to egg yield, condition, feed, or anything else, write to me at 381 Fourth Avenue, New York City, and let our poultry expert see if he can't help you. He won't just write you a letter: he will study your problem and really try to *help* you. State your question in full. THE EDITOR.

Oil the Machine

By Fern Laurence

SOMETIMES my sewing machine becomes gummed, and refuses to move, so I pour coal oil into the oil holes, take the thread out of the needle, and run the machine. The coal oil soon cuts the dirt and gummed oil. Then I wipe off all the coal oil, and oil with good machine oil.

This knowledge has saved me sending for the repair man a number of times; also has saved much time. It is a simple thing, and yet many women neglect it.

When the Boys Sell Pigs

By A. M. Paterson (*Kansas*)

AUCTION sales to dispose of the surplus of the boys' pig clubs is the latest development of the very successful work of this character in Georgia. This appeal to the youth of that State has been systematic and successful, and is showing results.

Exhibits of the pigs raised by the lads have been made at the fairs, and production has been sufficiently increased to require a convenient outlet. A series of sales will be conducted, and no less than 200 pedigreed pigs offered from herds which this club movement has founded.

The introduction of this sale feature will serve a twofold purpose: it will give encouraging clearance for stock ready to market, and it will afford an excellent opportunity for the extension of valuable work in increased production.

Word comes from the South that stocks of meats are constantly increasing. Some little influence is already registered on the central markets by this increase in production, and the South is just at the threshold of serving itself with pork.

Save the Milk This Summer

THE almost universal ice shortage this summer has made strenuous action on the part of the milk producer necessary. Where ice is not available in usual quantities, a water-cooling system should be installed. Milk should always be cooled to a temperature of 58 degrees F. or less. To do this the water should be at a temperature of 45 degrees F. or less. If the water is not this cold, ice must be used. Cork insulation in the walls of the tank will keep the water cooler. Set the cans on a rack so the water can circulate underneath.

When a surface cooler is used, 10 or 15 gallons of water should pass through the cooler for every gallon of milk. Keep the cans covered to the necks until ready to ship. Do not fail to wrap the cans in wet burlap while taking them to the station.

Do Your Rotations Pay?

ARE your present crop rotations bringing you the biggest money returns consistent with good farm practice? If not, FARM AND FIRESIDE may be able to help you. Any question you want answered about any crop or method of handling soils will be answered by one of the best practical farm authorities in the United States if you will write it to me at 381 Fourth Avenue, New York City. State your question in detail. THE EDITOR.

The Salisbury New Rear Axle



Pressed Steel Standard Type

"Always Safe"

AN automobile is only as good as its *rear axle*. Remember—you may have the best engine in the world in your car but that does not and cannot make it a *good motor car* unless the *rear axle* is mechanically correct and physically perfect.

Few people realize that the *rear axle* of an automobile is, next to the engine, the most important mechanical factor in producing a good automobile. The engine's power is transmitted to the rear (driving) wheels through the pinion gear of the propeller shaft and differential mechanism—all part of the *rear axle*.

The *rear axle* of a carriage or wagon carries the weight of the vehicle on the spindle. The *rear axle* of an automobile carries the weight of the vehicle on its *housing*—the pressed steel case which encloses the differential gear, driving shaft and all bearings—and includes the wheel hubs, brakes and brake mechanism complete ready for use.

One may better understand the importance of the *rear axle* when it is said there are over 150 individual parts of the *rear axle* mechanism that must be carefully machined and fitted to micrometer measure. This mechanism must be compact, silent and of great strength to transmit the power of the engine to the driving wheels with the least possible friction or loss of power.

The Salisbury New Pressed Steel Rear Axle is produced in our two big plants after 15 years' successful building of front and rear automobile axles, complete with hubs and brakes, for the trade. It combines the great strength and durability of our own special formulae steel with simplicity of construction.

Made in three standard sizes for cars weighing 1700 to 4000 pounds.

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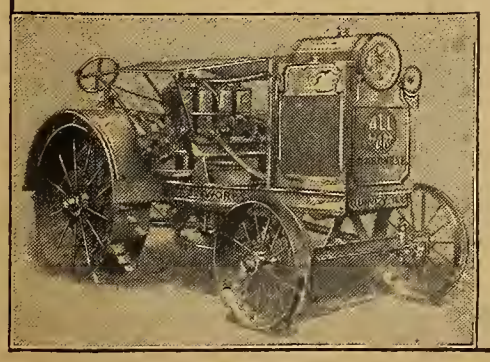


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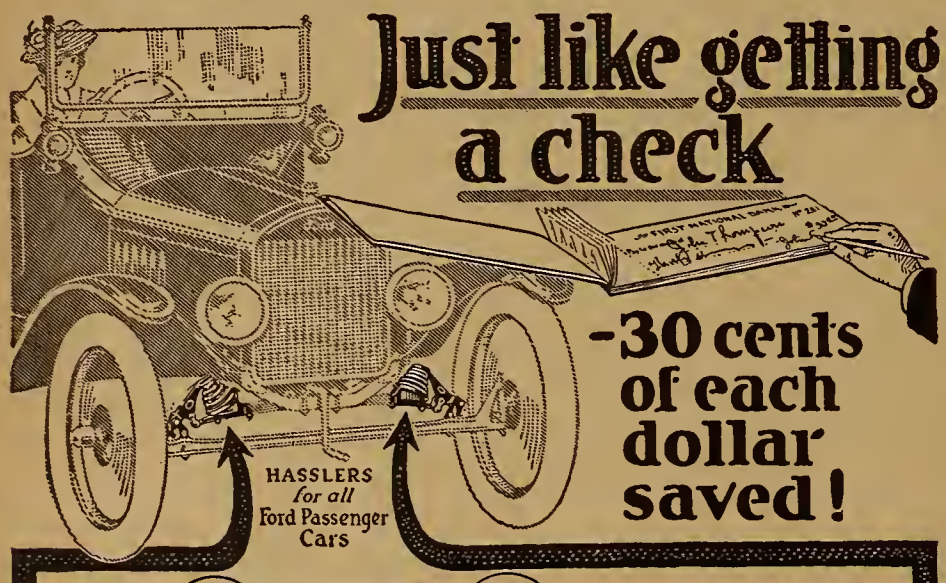
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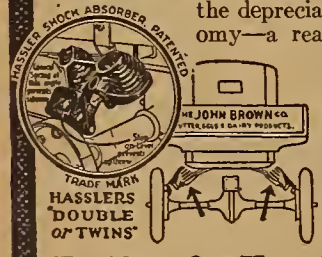
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Wise Bankers Are Helping Good Farmers

[CONTINUED ON PAGE 9]

nearly all of these were men averaging more than 10,000 pounds of milk a cow every year, while the average state production is 5,000. Farmers learned how to feed balanced rations and to weed out "boarder" cows.

The bank agriculturist hammered in the idea that farming was not "something different," and that lack of business judgment rather than a lack of knowledge of crop-growing and live-stock raising often made rich farmers poor and poor farmers poorer.

There were overlapping milk routes. Distribution was expensive. The bank encouraged the organization of the Producers' Dairy Company, in which eighty-eight farmers combined their entire output of milk and handled it through a central pasteurizing and delivery plant. The company was capitalized for $150,000. The bank financed the enterprise, lending three fourths of the face value of the stock on farmers' notes, with the stock as a collateral. A model dairy plant was erected. One result was that the farmers received two cents more a quart for their milk.

Brockton heard the squealing of pigs which boys and girls were carrying home in their bags. In two years 1,000 porkers were placed this way. One boy won the bank's first prize of $100 for the best pig. It changed his future. He had planned to leave school and go to work. Now he's saving up to go to the state agricultural college.

A young market gardener, starting in business, borrowed $300 on the strength of his character. In a year he made a net profit of $2,000. To show his gratitude he drew plans for a home garden, and the bank distributed 4,000 of the manuals which contained it.

Co-operative buying, community buying, and many other activities were followed. Farmers constantly came to the bank for counsel. As an automatic result they learned how to use a bank, how to keep cost accounts, how to make out statements—in short, how to know their job from the business as well as agricultural standpoint. It brought about an agricultural revival.

Another Massachusetts bank—the Holyoke—was also a pioneer. George C. Gill, its president, was farm-born, and that helped a lot, because he had some idea what the man on the other side of the counter thought.

"After inspecting the farm, if there is need for credit, it is offered," Mr. Gill explains. "If the farmer's holdings do not warrant a loan, sometimes an indorsement by a friend or neighbor is obtained; sometimes credit is given simply on the strength of character, habits, and integrity. In no case have we suffered a loss. Often we have seen farmers from four or five surrounding towns in the bank at the same time.

"The average farmer in this section was at first afraid to go into a bank. We have shown them that it is as easy to walk in and get acquainted as it is to walk into a railroad station and buy a railroad ticket. The farmer is not made to feel that he is asking a favor."

Let's jump to the banks of the Wabash. In Indiana and the rest of the Middle West, the bread basket of the nation, the farmer, like as not, owns stock in the bank. His credit is A1 because his farming is good. That doesn't mean that he cannot improve or that he has nothing to learn. But a banker-farmer for a Middle Western Bank, such as the First National of Vincennes, Indiana, works along somewhat different lines from those of the East.



Raymond K. Clapp, First National Bank, New Haven, Connecticut

The bank does not have to spend so much time with individual credit needs, but strives to better general agricultural practices for the benefit of the community. Its own dividends would be more indirect than tangible.

The banker-farmer, O. H. Anderson, practical farmer as well as a product of the state college of agriculture, fitted up the bank basement with racks to hold boxes for testing seed corn. More than a hundred farmers brought sample ears, and 15,000 were tested. It was easily shown that much of this corn was unfit for seed. Afterward, when Anderson compared the fields which were planted with tested seed with the stands of untested seed, the stand in the field generally checked up closely with the bank's test.

As a result these Hoosier farmers increased their yields and their bank balances. One farmer acknowledged that his tested corn returned 15 bushels an acre more than that from untested seed planted under similar conditions in the same field. Another gave the bank credit for saving his corn crop, as he had expected to plant seed from his crib, which the test showed would germinate only 20 per cent. He obtained better corn and tested every ear. Still another farmer measured the rack germinating boxes, and built an equipment to test his own seed.

The bank is inducing these grain farmers to pay more attention to live stock. One farmer fed eight pigs under the advice of the agriculturist. They gained 1,635 pounds at a cost of $11.32 a hundredweight gain, and sold for $19 a hundredweight. The farmer straightway bought seven more shotes. He was converted.



Harold Aiken, field agent Plymouth County Trust Company, Brockton, Massachusetts

The bank has distributed two carloads of Holstein heifers at cost, and is directing milk-testing in 12 herds. Testing soils for acidity is another project. This has located much acid soil, and Anderson has helped farmers to buy and use ground limestone. These and other activities are carried on with the frequent co-operation of the county agent, who has found that the mere fact that the bank is behind such work is a strong argument.

Another jump: West. C. S. Hudson, head of the First National Bank of Bend, Oregon, has always been a banker-farmer. He's chairman of his bankers' state association committee on agriculture. The other day he engaged R. A. Ward, who had made a good county agent, and even gave him the title of vice president. That doesn't mean that Ward is going to put on white collars and airs, for I have a picture of him at work on his new job. Instead of sitting at a mahogany desk, this new type of banker, clad in a sombrero, corduroy trousers, and boots, is vaccinating cattle for a homesteader!

Ward has bought 15,000 pounds of

alfalfa seed which he is selling to farmers absolutely at cost at six per cent interest on a year's time. He expects to inspire the planting of 2,000 acres of alfalfa. Now, the difference between an irrigated alfalfa stand and irrigated land not in alfalfa is about $45 an acre, so Ward figures that the campaign will increase the county's wealth about $80,000.

Another Oregon institution—the Live Stock State Bank of North Portland, located at the Union Stockyards—has gone them all one better. Its business is with many country banks in Oregon, Washington, Idaho, and Montana. So it employed an agriculturist—R. A. Blanchard, and he's a mighty good one, too—to travel around and inspire these banks to get into the agricultural game.

Blanchard is proud that last year he interested 34 banks in various agricultural activities, and that there will be double that number for 1919, and prouder yet that one bank, the Farmers Savings of Walla Walla, Washington, has an agriculturist of its own, while at least one other bank will soon have its own man.

There are at least twenty-five bank agriculturists at work in the United States. Even a "big city" bank like the Society for Savings of Cleveland, Ohio, has decided that asphalt boulevards lead out into the open country.

The story of the banker-farmer is one of increased and more profitable production, of benefits gained by more and better live stock, of soil saving, of inspired boys and girls, of a better understanding by bankers and farmers of each other's problems—it's a story of better farmers, better bankers, and better communities.

They held a banker-farmer conference in Chicago in 1915. At that time there were not more than two banker-farmers in the whole country. Yet Dean J. H. Skinner of Purdue University said:

"I believe that the day will come in our larger banks, and many of our country banks, when the bank cannot afford to be without a man trained in agriculture, who not only looks over the farm to see whether it is worth the loan or not, but who goes about among the farmers and finds out what their methods, facilities, and systems are, and who is in a position to give them information that will improve their farms and enable them to make wise use of money or credit, to put them in touch with the best information available."

Power and the Job

MANY a farmer has bought an engine and, after getting it home, found that it was too small to do certain work he had planned for it. This is not surprising, for power requirements of small farm machines vary considerably on account of the different kinds of work. It is not possible to select an engine that will run each machine most efficiently, consequently the essential point is to choose the engine which has plenty of power to run the largest machine for which it is intended.

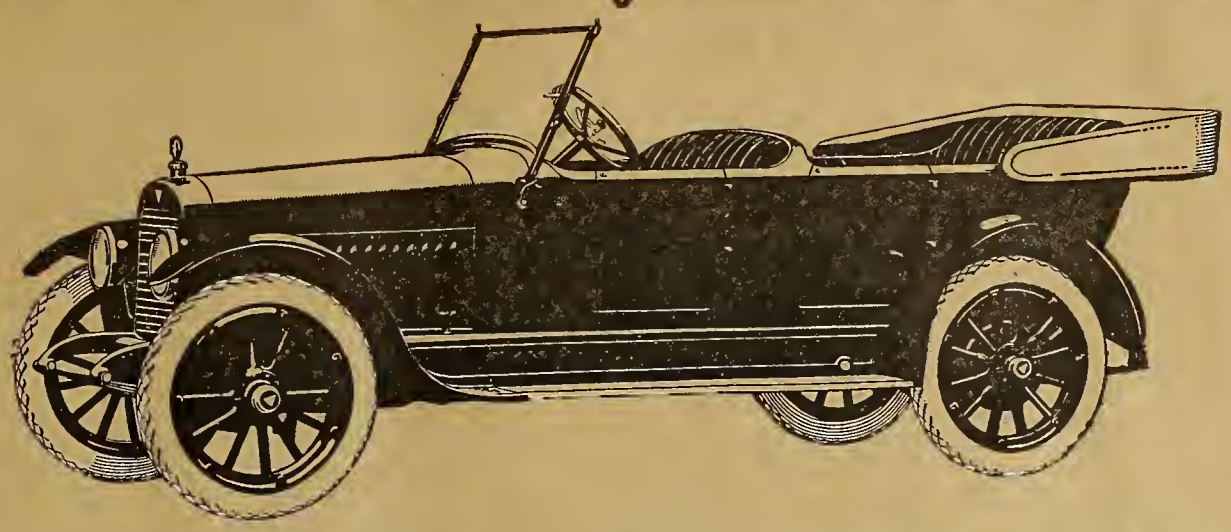
Here is a list showing the power requirements of common farm machines; it may help you some time in picking out an engine:

Grindstone, one-half horsepower; washing machine, one-half to one horsepower; pump, one and one-half to three horsepower; milking machine, same as for pump; feed grinder, four horsepower and up, depending on size; binder engine, three to five horsepower; shredder, silage cutter, and hay press, six horsepower and upward, depending on size.

Since we know it is not economical to run a small machine with a large engine, many farmers construct a line shaft and operate several machines at one time. Where this is not convenient, it might pay to have two engines, one for the smaller power jobs, and one for the heavier work.

Have You Machinery Troubles?

IF YOU are up against some knotty problem about your tractor, or any of the power or hand machinery on your place, write to FARM AND FIRESIDE, 381 Fourth Avenue, New York City, and our expert farm engineer will help you. State your question in full. THE EDITOR.



A New Car—A New Price—Greater Value
The Hudson Super-Six $1975

Four Years Experience and 60,000 in Service Result in a Super-Six Which Men Say Has No Rival

Owners of earlier Hudson Super-Sixes—there are 60,000—are the most appreciative appraisers of the new model.

They know the reliability of Hudson endurance and have long said it was potentially the greatest car built. The improvements their experience has suggested have been made. Annoyances that have been regarded as inevitable to all cars have been eliminated.

With practically every dealer, his first sales of the new Hudson Super-Six were made to those who have owned Hudsons for years.

They Saw Qualities You Will Want

This is the tenth year of Hudson leadership. The Super-Six is four years old. When it came the trend was toward motors of many cylinders. But its freedom from vibration, obtained by a patented motor which added 72% to power without increase of size or weight was what had been sought for. Smoothness meant easier riding and greater endurance.

The Super-Six established its leadership in these qualities in every avenue open to such proof. It became the most famous speed car.

But the Super-Six was not designed as a race car. It merely established its speed qualities in the development of its value as a reliable enduring car such as you want.

Those qualities were established with the first Super-Six. Subsequent models revealed the refinements that come only from experience. Each year saw an advancement over previous models. This new model attains the ideal for which we have sought.

No other fine car is so well regarded by so many people. There is a Hudson Super-Six for each six miles of improved roadway in America. You will see more Hudson closed- and chauffeur-driven cars on Fifth Avenue than of any other make. It is the choice car of the business man, the farmer, the rancher, the mountaineer and the tourist. With changes that can be made in any Super-Six, it is the car upon which race drivers rely to win prizes in 500-mile speedway events or in the most famous road races.

How It Was Improved

The new Super-Six starts easier, rides easier and runs smoother. All its excellent qualities you know are retained—in many instances, enhanced.

Owners of earlier Hudsons see its finer values as you detect the matured nature of a friend in whom you have long admired qualities of sturdiness and reliability.

Prompt Delivery for Early Buyers

Each season has seen a Hudson shortage. Reports from dealers indicate sales are increasing faster than production. Buyers have waited months to get the car of their choice. You will do well to decide now.

The new Super-Six sells at $1975, f. o. b. Detroit. Compare that price with the price of less wanted cars and then think how much greater will be the demand for Hudsons this year than ever before.

(1075) **Hudson Motor Car Company Detroit, Michigan**



NOW IS THE TIME!

Speak up NOW IF YOUR CHURCH NEEDS FUNDS

The Crowell Church Aid Plan will supply from $50 to $100 or more each month. Your Young People's Society, Ladies' Aid, Christian Endeavor or Epworth League can adopt the Crowell Church Aid Plan and get a good, big donation from the Crowell Church Aid Department each month toward some fund your church may want to raise!

WRITE TO-DAY for a Church Aid Circular, and let us help your church.

Church Aid Department
THE CROWELL PUBLISHING COMPANY
381 4th Avenue, New York City

30 DAYS FREE TRIAL



and *freight prepaid* on any **"RANGER"** bicycle. **Write at once** for our *big catalog* and *special offers*. Select from 44 styles, colors and sizes in the **"RANGER"** line.

EASY PAYMENTS if desired, at a small advance over our Regular Factory-to-Rider cash prices.

You cannot afford to buy without getting our *latest propositions* and **Factory-to-Rider** prices.

Boys, be a **"Rider Agent"** and make big money taking orders for bicycles and supplies. Get our *liberal terms* on a sample to introduce the new **"RANGER"**.

Tires, equipment, sundries and everything in the bicycle line at *half usual prices. Write today.*

MEAD CYCLE COMPANY Dept. B-83, Chicago

START A GARAGE

Thousands of openings good for $200 to $500 per month profit. Learn the business in this, the greatest and most proficient motor car school in America. No previous experience required. Thousands have learned here in 6 to 8 weeks and now making good as garage-owners and managers. Our big free book explains all. Write for it NOW.

RAHE'S AUTO & TRACTOR SCHOOL
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BE AN EXPERT



Auto and Tractor Mechanic Earn $100 to $400 a Month

Young man, are you mechanically inclined? Come to the Sweeney School. Learn to be an expert. I teach with tools not books. Do the work yourself, that's the secret of the

SWEENEY SYSTEM

of practical training by which 5,000 soldiers were trained for U. S. Government and over 20,000 expert mechanics. Learn in a few weeks; no previous experience necessary.

FREE Write today for illustrated free catalog showing hundreds of pictures men working in new Million Dollar Trade School.

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SCHOOL OF AUTO-TRACTOR-AVIATION
11 SWEENEY BLDG. KANSAS CITY, MO.

Our Letters to Each Other

This is where we take a few lines every month to talk things over, so if you've got anything on your mind, let's hear from you

JUDGING from the letters you write, folks, you're getting as much fun out of this page as I am. Our friendly family is growing at a terrific rate, and if I didn't like to get letters as well as I do I'd be yelling for mercy. But you can't stump me. I *like* to get letters. Come on with yours. The address is 381 Fourth Avenue, New York City, and I'm always at home to any FARM AND FIRESIDER who has troubles or joys to talk about.

Yes, Ruth, We Know

Ruth D. of Missouri has just been married, and she wants to know why they throw rice and old shoes, why they use a ring and why they do a lot of things that don't seem to mean anything in particular at a wedding. All right, Ruth, here's your anwer:

Almost every marriage custom of to-day got its start among our half-civilized ancestors of many centuries ago. We are creatures of habit, and we stick to lots of things without rhyme or reason.

We all know about the rice-throwing, the flinging of old shoes, the use of the ring, the joining of hands, the use of the bridal veil, the wedding bell, the white robes of the bride, the honeymoon.

The use of the rice is borrowed from China, where, from time immemorial, handfuls have been thrown at the marriage couple with the prayer that they might never want for food. In olden times the bride's apparel was sent after her to her new home, in token of renunciation, and the throwing of the shoes was a symbol that she had been given up by her parents and turned over for management to her husband.

Once, all marriage was by capture, and the groom's "best man" was in those old days the best armed and sturdiest fighter of his acquaintance, who accompanied him to assist in the abduction and, if necessary, fight the whole family. The honeymoon represents the concealment of the groom and his bride until the family has been placated with presents.

The hands are now joined, but were once tied together, and the ring symbolizes the chain or handcuff by the aid of which the bride was dragged away. Orange blossoms were once supposed to have magical virtue; the bride's veil was at first the blanket thrown over her head to stifle her screams, and later a thick canopy to hide her blushes.

Hurrah for You, Bob!

It may interest you to know, Mr. Robert F. Spence, county agent, of Berea, Kentucky, that James T. Brown, the goodman who runs the tavern in your town, thinks very highly, indeed, of you and your accomplishments down there. And he sends along one of your programs for the good folk on the farms of Rockcastle and Madison counties, on the edge of the eastern Kentucky mountains. It looks like a good program, and the whole incident just goes to show that when any man does good work he cannot possibly avoid getting credit for it, and he shall prosper and be beloved of his kind. And we endorse mine host Brown's statement here following, to wit:

Mr. Spence is doing magnificent work for the mountaineers of this section. And Kentucky is not so backward after all. She can be noted for other things besides whisky, horses, and beautiful women.

It is even so, Mr. Brown; and we are glad that whisky, which this month ceases to be famous anywhere in these United States, has such a worthy successor in Kentucky.

Jonathan, You've Certainly Got the Right Idea

Jonathan D. of Illinois sends us an outline of what he is going to do when he gets to be President. He is quite well along, but he's a foresighted man, believes in looking ahead. And you never can tell—maybe he *will* be President. General Grant was a driver on a horse car when the Civil War broke out, you know, and it wound up with him in the White House.

For one thing, Jonathan says he would cut his own salary from $75,000 a year to $25,000, as President. Then he would abandon the White House and build a small one that was "cheap to keep up." His chief interest would be to make men "good" and do the right thing by the children:

"Little children are the best things on earth, and any family, state or national government that sets bad examples before them is not worthy to be called a government. Good habits make all mankind happy and content. I love to do good. When I do good I feel good. When I do bad I feel bad."

True for you, Jonathan. You can have my vote.

Got a Job for Him?

DEAR EDITOR: Will you please print the following letter for me?

I am a minister's wife, we have two children, aged five and seven years. My husband has tried every business house here and in some other cities, and failed to obtain employment. There are so many soldiers for whom the Government is trying to secure situations that a civilian can hardly get employment.

Husband is crippled, but can do most any kind of work. We were both reared on the farm. We dearly love farm life, and hope some day to own a home of our very own. He is thirty-five, I am twenty-seven.

Is there not someone among the many FARM AND FIRESIDE readers who can give us some kind of permanent employment? We are willing to do any kind of work. We are both well educated. Can give any kind of references. M. K.

Of course I don't know, but it seems to me that somewhere among the 700,000 members of FARM AND FIRESIDE'S family there ought to be a good permanent job for you folks, with more than a slim chance of realizing that ambition to own a home of your very own some time. How about it, readers? Isn't there someone among you who would like to place these people and, in addition to a good farmhand, get a man of the cloth who could fill the pulpit of that little church in your neighborhood that has been vacant so long?



Robert F. Spence of Kentucky

Got Any Sawdust?

"Wood sawing on my place," writes M. C. of Oregon, "makes quite a bit of sawdust, and I was just wondering if there mustn't be some millions of bushels of it at the sawmills and on private farms around the country. And what do they do with it in quantities? Is it mostly wasted?"

Not on your life, it isn't wasted, M. C. It used to be, but it is coming into use as a very valuable by-product in the business world to-day, and maybe those of FARM AND FIRESIDE'S family who have it in quantity might find a market for it through what I am going to tell you:

Statisticians say that of the total cut of lumber in this country, 11 per cent, or about 11,000,000,000 feet, is wasted yearly in sawdust. This amount of lumber is enough to build over 100,000 good, substantial frame houses.

It is now recognized that there is better use for sawdust than burning it as sawdust, or allowing it to lie and rot in great piles wherever a sawmill has been operated. The amount used in packing ice, stuffing dolls, and scattering over floors is small.

The process of reclaiming this waste material into valuable articles has been in progress for some time in the Government's laboratory at Madison, Wisconsin, where there has been produced baking powder and artificial silk socks, and it has also been ground into "wood flour," which is in demand for an absorbent in preparing dynamite for use. It is also being utilized in making wood stucco, molding, and floor-polishing material; so before long the entire output may be converted into valuable articles of commerce.

If you want to know where and how to dispose of your sawdust for cash, why not write to this government station and ask about markets? If they don't tell you, write us at 381 Fourth Avenue, New York City, and we'll see what we can find out for you.

He Sold Himself Cheap

"They tell me," writes M. K. of Michigan, "that everything is very, very high-priced now, but just to-day I saw a physically magnificent man, 6 feet 2 inches in his stocking feet, white twenty-one, and of good family, bought for only 25 cents, and I thought him dear at the price.

"Four others, two of them children, saw the same thing, and henceforth his valuation to them will be 25 cents. Truly a big price to pay for keeping such a little sum, accidentally given while a friend was making change. Had the friend known, he would think the money well spent in getting his true valuation, for then he would know better than to trust him in a larger way.

"Can you figure your valuation in dollars and cents, or is it priceless? Watch yourself and see."

Honesty is an old habit, as old as the world, and one that is constantly falling into disuse among the new flock of folks who fill and empty the world from generation to generation. I have enough faith in human nature to believe that 99 out of every 100 folks *mean* to be honest, but it is little tricks like M. K. tells about that lead them astray. Abraham Lincoln was known throughout his career as "Honest Abe," and it is told of him that when he was clerking in a store in Illinois he walked all night once to get to the home of a farmer's wife he had accidentally short-changed a few cents on some butter and eggs the day before; then all the way back to take up his day's work at the store. It truly is our particularity in such little things as these when we are young that goes far toward shaping our characters as we grow older.

Still Poor at Forty-five

"It seems to me," writes J. B. G. of Minnesota, "that I ought to be getting along a lot faster than I am. At forty-five I am not unusually well fixed, although I have worked hard and steadily all my life. Of course my wife and two girls have a home, though a modest one, and we have plenty to eat of our own raising, and enough clothes. I suppose if I had to I could realize $7,000 or $8,000 out of my property, but don't you think a man ought to be farther along the road at my age?"

If you only knew it, J. B. G., you are far more fortunate than most men. We know many a man of forty-five who would be tickled to death if he could boast your possessions. And just to show you that the facts bear us out in this, read what George Barrett says after compiling a report on the average man's wealth from reports of the American Bankers' Association and various life-insurance companies:

At thirty-five, after passing ten years of their earning experience, we find that out of 100 men 5 are dead, 35 have not improved financially, while 60 out of the hundred are in an improved financial condition, ranging from moderate resources to wealthy.

It is an old saying that it is easier to make money than to keep it, and this is a fact because at forty-five we find that only 4 out of the hundred are wealthy, and that 65 out of the 84 then living are self-supporting, but have no other resources.

These figures would seem to bear out fully the old adage. Just think of it—out of 60 men of whom 40 at 35 had moderate resources, 16 were in good circumstances and 10 were wealthy, only 4 remain that may be regarded as wealthy, and none of the others have any resources except their weekly earnings.

So you see, J. B. G., you are one of four men in every hundred.

Who Said Farm Life Wasn't Exciting?

NOGALES, ARIZONA.

After being held for ransom for five days by bandits, A. D. Ayle and H. Barton, American farmers, having holdings near Ameca, State of Jalisca, were released to-day when the Chamber of Commerce of that place delivered the sum of $2,000 to the bandits, who are said to be a Zapatista gang. SINALOA.

So long for this time, all of you. We'll get together on this page again some time the early part of August.

GEORGE MARTIN, EDITOR.

Mountaineers Who Know the Secret of Productive Soil

FAR back in the misty-blue foothills of the Cumberlands, with their towering cliffs of rough sandstone, the miracle of lime-sweet soil is being preached. This preaching has not been in vain, because converts, clad in blue overalls, come down to the railroad in their small wagons to secure the wonder-working white dust for their tiny fields.



It makes no difference what kind of a team you use to get limestone—just so you get it

That these big mountaineers believe in the rebirth of their sandstone soil through a baptism of ground limestone is proved by the time and labor they give to get the dust back to their farms in the hills. These believers drive down out of the foothills over roads which frequently follow the meanderings of creek beds as the best grade to be found to the valleys below. The climb up these primitive roads is so abrupt and rough that 600 or 700 pounds is a full load for a good team.

The photograph shows a pair of slow-moving, last-century oxen hauling a small load of life-giving, twentieth-century limestone dust from a railroad siding in Kentucky back to a mountain farm, so that farming may become safer and home life better and sweeter. It is a picture which shows at a glance the past and the present rubbing elbows. JAMES SPEED.

FARM & FIRESIDE

The National Farm Magazine

AUGUST 1919 5¢ A COPY



In This Issue— **Can Farmers Pull Together?**



This Everlastic Multi-Shingle Roof withstood a 120-mile hurricane. While other kinds of roofs in the storm zone were ripped off and destroyed by the terrific wind, Everlastic Multi-Shingles came through undamaged. The house is owned by H. C. McWilliams and is located at Lake Charles, La.

Barrett Everlastic Roofings

THERE is no more serviceable and sightly covering for country homes than Everlastic Slate-Surfaced Roofings in their soft shades of red or green.

And there is no more economical and durable roofing for barns, sheds, chicken houses, silos, etc., than Everlastic "Rubber" Roofing.

Each of the four types of Everlastic Roofings is described briefly in the adjoining column. Read about them. Then send for free illustrated booklet containing complete details.

The Barrett Company

New York	Chicago	Philadelphia
Boston	St. Louis	Cleveland
Cincinnati	Pittsburgh	Detroit
New Orleans	Birmingham	Dallas
Kansas City	Minneapolis	Nashville
Salt Lake City	Seattle	Peoria
Atlanta	Duluth	Milwaukee
Bangor	Washington	Johnstown
Lebanon	Youngstown	Toledo
Columbus	Richmond	Latrobe
Bethlehem	Elizabeth	Buffalo
	Baltimore	

THE BARRETT COMPANY, Limited

Montreal Toronto Winnipeg
Vancouver St. John, N. B.
Halifax, N. S. Sydney, N. S.

Everlastic "Rubber" Roofing



A recognized standard among "rubber" roofings. Famous for its durability. Made of high-grade waterproofing materials, it defies wind and weather and insures dry, comfortable buildings under all weather conditions.



Everlastic Slate-Surfaced Roofing

A high-grade roll roofing, *surfaced with genuine crushed slate* in two natural shades, red or green. Needs no painting. Handsome enough for a home, economical enough for a barn or garage. Combines real protection against fire with beauty. Nails and cement with each roll.

Everlastic Multi-Shingles—(4-in-One)

Made of high-grade felt thoroughly water-proofed and *surfaced with crushed slate* in beautiful natural slate colors, either red or green. Laid in strips of *four shingles in one* at far less cost in labor and time than for wooden shingles. Gives you a roof of artistic beauty worthy of the finest buildings, and one that resists fire and weather. Needs no painting.





Everlastic Tylike Shingles

Made of the same durable slate-surfaced (red or green) material as Everlastic Multi-Shingles but cut into individual shingles, 8x12¾ inches. Laid like wooden shingles but cost less per year of service. Need no painting.

A practical type of barn in eastern New York. Illustration shows the buildings covered with Everlastic "Rubber" Roofing.

Now—there is only One farm engine

JUST think of the famous "Z" engine with a Bosch Magneto—high tension ignition, which delivers a steady succession of hot, intensive sparks.

Every farmer in America should at once call on the nearest "Z" engine dealer and see the result of this recent epoch-making combination—

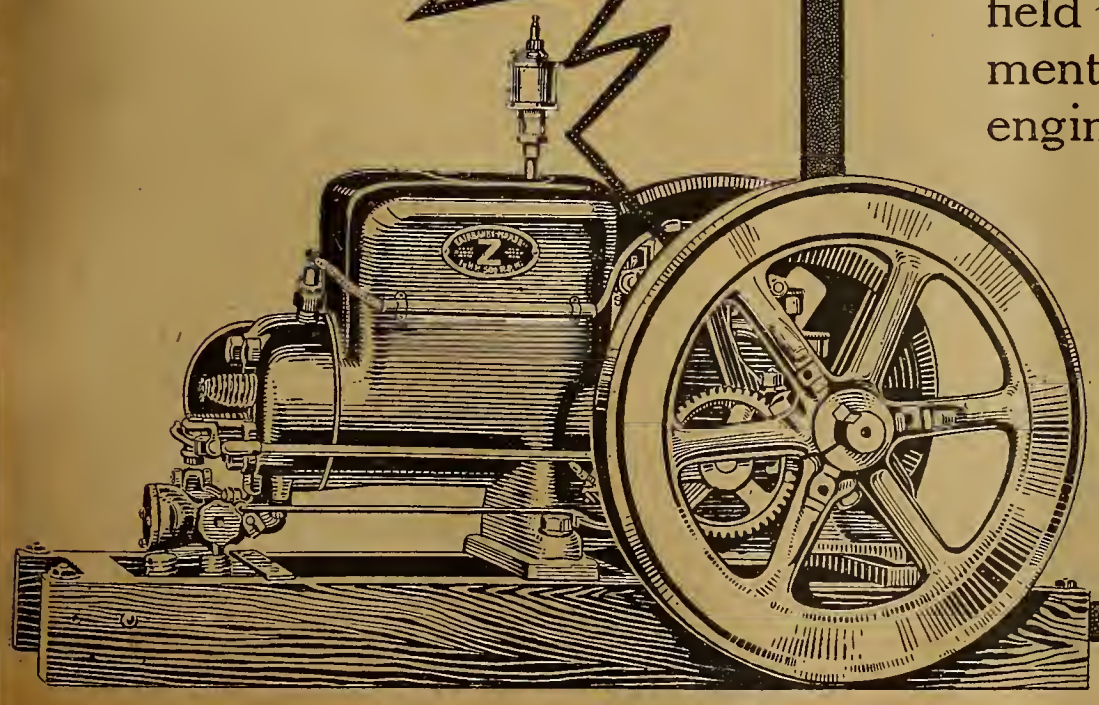
Fairbanks-Morse "Z" Engine With Bosch Magneto

Mechanical perfection—plus power—and right price—to date sold the "Z" to over 250,000 farmers.

This quality and quantity production enabled us to contract for the exclusive right in the farm engine field for this one possible "Z" betterment, which establishes a new farm engine standard.

BOSCH MAGNETO

FAIRBANKS MORSE "Z" FARM ENGINES



And over 200 Bosch Service Stations assist all our dealers in delivering maximum engine service.

Fairbanks, Morse & Co.
MANUFACTURERS CHICAGO

A Personal Experience with Threaded Rubber Insulation

I have one of the original lot of Still Better Willards, put out in 1916 before any announcement had been made to the general public.

It was in February, 1919, that I discovered my battery had Threaded Rubber Insulation. The car has seen plenty of hard service. I drove it all through the hard winter of 1918—extreme cold and lots of dark days.

But I never had any battery trouble of any kind till one morning in February when I found the battery dead. The day before, the distributor was out of order and a friend of mine who was driving, punished the starter severely and exhausted the battery.

I went to the nearest Willard Service Station, got a rental battery, and had mine recharged. I was told what I didn't know—that I had Threaded Rubber Insulation in my Willard Battery.

I haven't had it recharged since, and it has the same old punch and pep today (June 1st). That's some record, I'll say.

A. JUDSON,
13740 Euclid Ave., Cleveland, Ohio.

The above is a fair sample of what Threaded Rubber Insulation means. If this battery had had wood insulation, it would long since have had to be reinsulated; for the owner frankly admitted he had never been any too regular about keeping it filled with water.

Of course, starvation, overheating and improperly regulated electrical equipment will injure even a Willard Battery with Threaded Rubber Insulation, and therefore it's impossible to guarantee any definite length of life. But under equal conditions Threaded Rubber Insulation greatly extends a battery's life and indefinitely postpones reinsulation.

Three years' experience on thousands of cars has established this fact beyond any question.

Willard STORAGE BATTERY

Threaded Rubber Insulation



THIS is the battery referred to above, from a photograph taken three years and five months after it went into service. It was put back in the car and is still alive and kicking. Only once in its life was it recharged from an outside source.

Volume 43
Number 8

FARM & FIRESIDE
The National Farm Magazine

August
1919

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Introducing Farm and Fireside's New Staff of Corresponding Editors

How and Why We Got Them

THESE six new Corresponding Editors are the first of a nation-wide staff of field representatives of FARM AND FIRESIDE. Each one is a practical farmer. And each is located in a different part of the country, so that through them every issue of FARM AND FIRESIDE will mirror the important and interesting things that are going on in the farm field throughout the country day by day.

Their daily work is with the very problems they are to help you solve. There is no "theory" about these men. They do not *guess*—they work things out and *know*. Nor are they "office" men, although they all have offices.

The principal qualification of each is not the title he holds, but the *results* he has achieved. Results got them the titles, and it was on the basis of their ability to get results that we chose them. We chose them very carefully, listing all the available candidates in each field and allowing the ablest man in each group to take his place at the head of the list *on his own merits*.

You are invited to use them and their experience in solving your problems. They will not undertake to run your farm or do your thinking, but when some problem comes up that your own study and experience leaves still a problem, put it up to one of them. Write it clearly and fully, and address it to the proper editor at 381 Fourth Avenue, New York City, enclosing a stamped self-addressed envelope for reply.

GEORGE MARTIN, EDITOR.



J. F. DUGGAR of Alabama needs no introduction to any American farmer. He has lived and worked among his fellow farmers in many parts of the world, has traveled all over America and Europe, and is thoroughly in touch with all problems of crops and soils. And it is questions of crops and soils he will answer for you. Mr. Duggar is director of the Alabama Experiment Station, professor of agronomy, and director of the Agricultural Extension Service for Alabama. He was formerly editor of the "Southern Live Stock Journal." All inquiries originating south of the Mason and Dixon line will be answered by him.



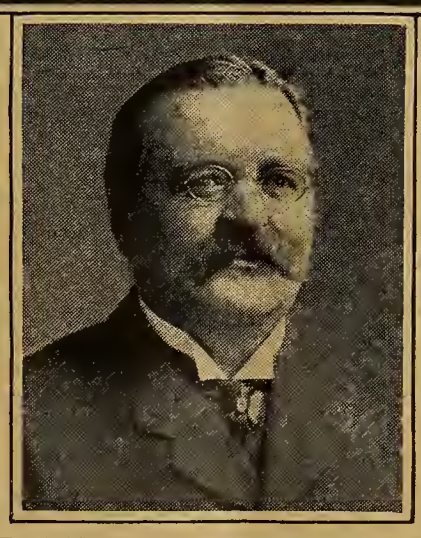
ALL your questions about poultry will be answered by Victor G. Aubry of New Jersey. He has devoted his life to the study of chickens. Starting with a flock of 1,500 fowls in Indiana, he went to Switzerland to take charge of a big poultry farm there. He graduated in poultry from Connecticut College of Agriculture, and later had charge of the poultry department at the University of Maine in 1914. Since then he has been associated with the New Jersey Agricultural Experiment Station. He does extension work throughout the East, and is in close touch with poultry and general farmers and knows their problems.



FREDERICK W. IVES of Ohio is secretary-treasurer of the National Association of Agricultural Engineers and professor of farm engineering at Ohio State University. His textbook on farm engineering is now being prepared. He is one of the deans of practical farm engineering in this country. He will answer your questions about farm-building construction, tiling, drainage, farm lighting, heating, water supply, sewage disposal, and farm machinery; he will also contribute articles to the magazine.



MARKETING is one of the big problems confronting you to-day, and we felt that we could serve you no better along this line than to have Thomas J. Delohery answer your stock-marketing questions straight from the Chicago yards. Mr. Delohery has spent eight years there and out among farmers, studying conditions. And you can count on what he tells you being his own sound, unprejudiced conviction, based on a careful study of facts. Delohery needs no introduction as a writer. You are already familiar with his work in FARM AND FIRESIDE.



IF YOU have ever attended the International at Chicago, you have probably seen Dr. A. S. Alexander, who will handle all your veterinary inquiries. We know of no one better fitted for the work. He is a consulting veterinary at Madison, Wisconsin, professor of veterinarian science at the University of Wisconsin, and director of the Division of Horse Breeding for the Wisconsin Department of Agriculture. Dr. Alexander has served as chief veterinarian for the International Live Stock Show, the highest honorary position any veterinarian can receive.



F. F. ROCKWELL, who will answer your questions on all garden and orchard problems, both of production and marketing, is recognized as one of the nation's leading authorities in his line. He has studied every branch of the work, in every section of the country, at first-hand. You probably have one or more of his garden and orchard books in your own library. In addition to running his own farm in New York State, he is secretary of the Nurserymen's National Service Bureau. You see him here engaged in his favorite pastime—work.

The Way We Started Our Farm Bureau and How It Has Paid Us

By H. C. Rogers

Secretary-Treasurer of the Ohio Farm Bureau Federation

OF COURSE, the important thing I want to do in writing this is to tell you how to organize a county farm bureau if you haven't got one, and then to point out why I think the county farm bureaus are leading rapidly to the first really strong national farmers' organization we have ever had in this country.

As a rule, any organization of importance grows so slowly that by the time it becomes powerful it is well known. But the Farm Bureau movement is an exception. This farmers' organization has grown to its present proportions so rapidly and quietly that many persons are scarcely aware of its existence. It now extends through nearly all the Northern and Western States, and is scattered here and there throughout the Union.

The county farm bureau, with its county agent, has been in operation in many places before our entrance into the war, and has demonstrated its value as a means for increasing production. When the war made more food necessary the Government began to push the organization of county farm bureaus in all States. The farmers themselves were not slow to see the advantage of working together for increased production and better marketing of their products.

We organized our bureau in a way which I believe is typical of the best. During the summer of 1917 some of the progressive farmers of the county discussed the farm idea. Finally we wrote to the Extension Department of the Ohio State University to learn how to start a bureau in our county. They sent a man to confer with us, and he explained the way in which the organization should be started. Briefly it is as follows:

Through the local press and personal invitation a meeting at the courthouse at the county seat was called for all who were interested. A fair representation from most townships responded, and a preliminary organization was formed at this meeting by electing a chairman, secretary, and treasurer.

From this meeting dates my active connection with the farm bureau. I happened to be elected chairman, and it was my first duty to determine whether the farmers were really interested or not. Some leaflets explaining the objects of bureau work were obtained from the university, and I appointed a man to act as chairman in each township. These men called meetings in their townships and explained the idea to the farmers. Membership lists were secured at this time, each man signing his name and paying a dollar to the farm-bureau treasury.

Our first object was to get a county agent as soon as possible, and to do this we had to secure 10 per cent of all the farmers of the county, as shown on the county auditor's books, as paid-up members of the organization. When we had the necessary members pledged, a meeting was called at the county seat.

At that time a permanent president, vice president, secretary, and treasurer were elected, and a constitution and by-laws adopted. These by-laws provide for the election of an executive board as the governing body, to consist of one man from each township, together with the president, vice president, secretary, and treasurer. The executive board holds a regular meeting at least once each month, and special meetings may be called by the president.

Every kind of farming in the county, such as crops, live stock, dairying, etc., has a man on the executive board as head of that particular activity. These men report at board meetings anything of interest in their department.

Each township in the county has its own organization, patterned very much after the county organization. These townships and community organizations are very important. They look after the special community needs and arrange for local meetings, at which the county agent can confer with the farmers. These meetings, where everyone feels free to talk, and where ideas and practical experiences are brought out, are of the very greatest help to all.

The township organizations were not formed when the county farm bureau was started. We think it better to have the county agent on the job for several months to become acquainted with all parts of the county, and to be on hand to assist each township in getting its organization started. I sometimes feel as though the township unit was the most important link in the chain.

The whole Farm Bureau movement is based on the needs of the individual farmer, hence the importance of having the smallest unit of our organization—the township—properly started so that it may cooperate with the other township organizations, and all build together a strong and harmonious county bureau. If the foundation of our structure is sound the superstructure is more likely to endure.

The law governing farm-bureau and county-agent work is as follows: When the county farm bureau is completed with 10 per cent of the farms of the county represented, the law provides for petitioning the county commissioners to set aside from the county general fund the sum of $1,500 for county-agent work. When this is done, the U. S. Department of Agriculture provides $1,600 to match the county's $1,500.

It is unfortunate that there are yet many farmers who are content to plod along in the same old way as their fathers and grandfathers. This kind of farming leads to soil impoverishment and lessened crop production. Agricultural colleges are no longer experiments. They are training young men so that when they start farming they have a basis of scientific knowledge of soils and soil chemistry to build on. They know how to choose feeds and balance rations to get greatly increased meat production from the feeds consumed. They know what kinds of fertilizers to use to increase production and maintain soil fertility. The farmer who follows these methods will realize better interest on his investment than the man who plods along in the old way.

The pick of these college graduates—and they are not boys, but men, generally thirty years old and upward—are being secured by the thousands for county agents. When a bureau is organized the question of where to find a man suited for their county agent confronts the executive board. Here is where assistance from the extension department of the state university is most valuable. Suitable men, who are kept tab on by the extension department, are sent to counties needing an agent. It is then up to the executive board to choose.

The county agent has an office at the county seat, and his services and advice are free to every farmer in the county. His duties are many and varied. He aids the dairy industry by encouraging cow-testing associations through which the loafer cows are found and sent to the butcher, also improvement of the live-stock industry by a greater use of pure-bred sires.

There is a loss of hundreds of millions of pounds of meat annually through the feeding of an unbalanced ration to live stock. Such a condition cannot be changed overnight, but the influence of a competent county agent working through a wel organized farm bureau will do more t remedy this and other faulty farm pra tices than anything else.

In many parts of the country it is esse tial that seed grain of oats, wheat, and ry be treated before planting, so that th smut spores will be destroyed. At presen smut injury causes an annual loss in th United States of about 100,000,000 bushel This loss can be practically all prevented a a trifling cost, but it requires a trained an competent man to go among the farme and show them how to treat their see grains.

Any organization as complete as county farm bureau has a lot of detail wor that must be attended to regularly if th organization is to prosper. Here is whe the county agent becomes most importan He is on the job every day, and the carin for the detail work of the farm burea amounts to but little with him, whereas left to the president or secretary, who a busy farmers usually, it very likely woul not be done at all. The writer happens t be president of a county bureau, and full realizes the value that lies in attention t these details.

Some of the things our farm bureau an county agents are doing are:

Increasing growth of legumes, such a clovers, alfalfa, and soybeans.

Encouraging more liberal use of con mercial fertilizer to increase productio and maintain soil fertility.

Compiling a registry and forming a association, in the county, of men who a growing pure-bred, registered live stoc This makes it possible for foreign buye to get in touch with the whole count through the county agent.

Offering cash prizes and promoting th boys' and girls' interest in farm wor through the formation of pig-growin clubs, garden contests, etc.

Finding the varieties of wheat, cor oats, etc., that have proved the best f the county, and inducing farmers to ado these varieties.

Organizing the county for business, usin townships as distributing units for th handling of car lots of fertilizer, fence post coal, etc. This organization also is used sell farm produce in car lots.

We maintain a farm bureau for sale an exchange column in our county pape Any member of the organization ma advertise anything he wishes to sell or bu free of cost.

In fact, our bureau and county agent a engaged in so many things of a helpf nature that it is useless to try to tell abo all of them here.

One of the most important steps o bureau has taken is the formation of legislative committee of about forty pick men who can be depended upon to go our state capital and see that farme interests receive fair recognition.

A good live county bureau of about thousand members can accomplish almo anything they undertake in the way local work. But one county bureau, ho ever strong it is, has little influence wh it comes to state affairs. But with all th county bureaus in a State banded togeth in a strong federation, constructive mea ures can be put through without mu trouble.

The writer happens to be the executi secretary of the Ohio Farm Federation, a it has been part of his work to see that t counties select their most influent farmers to serve [CONTINUED ON PAGE

The Loss of Two Legs and an Arm Didn't Hold Him Down



WE SHOULD all be willing to take our hats off to the man in the picture, for he has overcome one of the greatest of handicaps, and, instead of being an object of charity, is a most able four-horse teamster for a big lumber company in the Maine woods.

He is Samuel Gauthier, who some years ago was obliged to spend the night in a blizzard, while driving on a lumber tote road. Both his feet and one hand were frozen, and had to be amputated, leaving him only his left hand and his head with which to earn his living. He has made good, too.

Instead of having artificial limbs made and adjusted by surgeons, he fashioned his feet to suit his own ideas, from the tough roots of trees, painted them black, and attached them to his own calves with iron and leather straps. He handles them perfectly. He often says that he has it all over his pals in that his feet and his right hand are never cold, and that, instead of his shoes wearing out, only his feet wear out, and he can whittle new ones.

LENA P. GRANT.



Ah guess Ah'll go swimmin'—

in de li'l ole pond.

An den again—

Ah guess Ah won't!

DRAWING BY E. W. KEMBLE

Can Farmers Pull Together?

A study of some of the reasons why they haven't done so in the past, and of other reasons why they probably will do so in the future

A KANSAS farmer, a good, substantial, hard-working man who knows his business and takes a great deal of interest in running it right, was talking to me the other day about things in general—just visiting, you know. The talk switched to agricultural leaders and farm organizations. And suddenly this man said:

"Who is the biggest man in American agriculture to-day?"

I replied:

"You are."

He laughed.

"Why," said he, "you know very well I'm just a plain Kansas farmer with a good hundred and sixty. Nobody ever heard of me. Don't talk nonsense. Answer me seriously."

"My friend," said I, "I am answering you seriously. I meant what I said. And I'll go further and say that if every man back of the 650,000 farmers who read FARM AND FIRESIDE were to come one by one and ask me the same question I would answer every one of them the same way. And my statement would be literally true in every case."

"How do you figure that?" he asked.

"To answer your question with a question, what constitutes a big man in agriculture? What makes him big?"

"His knowledge of conditions, I should say, coupled with his ability to help farmers farm more successfully and make more money and live more happily."

"Not at all," said I. "The biggest man in agriculture is the man who makes a personal contribution to the progress and development of agriculture—the man who on his own farm works out a more successful crop rotation, or a method of growing profitable crops in soil that never grew them before, or a better breed of stock, or a better system of marketing.

"And the only man in the world who can help the farmer is the farmer himself.

"From the Secretary of Agriculture straight down through the entire list to the newest county agent, home demonstrator, or experiment station director there is not what I would call a big man in agriculture. These men are important, of course, but only in so far as they are *your* agents, only in so far as they gather up the things *you* have worked out and put that information in the form of bulletins and agricultural courses and lectures and movies, and thus redistribute them to all the other farmers.

"Don't ever be fooled by the high-sounding of a man's title, or the fine furniture of an office, or the size of the building he is in. Remind yourself that if it weren't for the progressive farming *you* are doing on *your* farm, there would be no high-sounding title, no fine furniture, and no office building, because there would be no tax money out of your farm pocketbook to maintain them."

And that, Mr. Farmer Reader of FARM AND FIRESIDE, is why I say that *you* are the biggest man in American agriculture.

Now let's apply that same thought to the much-discussed and little understood question of why the American farmer isn't nationally organized. Why isn't there one great national organization which speaks the voice of all farmers everywhere in the land—an organization whose voice ought to have been loud and clear in America's delegation at the Peace Conference, and which ought even now to be heard to real effect and certain purpose on the great problems of reconstruction?

We all know, despite the fact that there are some splendid farmers' organizations in this country, that there is not this united and effective voice to be heard.

Why?

I think it is because we have been organizing too much from the top down, instead of from the bottom up.

Without wishing in any way to detract from the splendid work and ideals of those good men who have been behind the best of our existing farm organizations, I think the organizations have been too much of a great Idea in a *few* men's minds—with a more or less disinterested membership saying, "Yes, that's fine, put me down for a membership"—instead of being a Great Idea based on a *deep personal interest* in *several millions* of men's minds.

In other words, it has been too much a case of a few men trying to improve the affairs of a great many men, instead of showing the many men how they could improve themselves.

Men resent being "improved." I resent it. You resent it. But we appreciate being shown how we can help ourselves.

When some man comes along with some scheme to "improve" us, we don't like him. His very thought that he can improve us implies that he considers himself smarter than we are. And we resent that. We like to feel that we've got sense enough to do the thing for ourselves. And, indeed, most of us have, even if we don't always do it.

Do not mistake me. This is not an attack on any existing organization. It is merely a searching for the foundation from which we can all go forward to something really big in which *all* of us can have a part. I hold no brief for any one man or body of men with a Big Idea to put across. The most hopeful situation I can see among the farmers to-day, is not any one man's idea—least of all was it *my* idea—but one which, more or less like Topsy, "just growed." But more of that later.

It seems to me that the reason none of the existing organizations have developed into a really strong national body is because you have not been able to see *yourself* in any of them—you could not see where it connected with your farm, your live stock, your marketing problems, in such a way as to help you individually.

We are selfish "critters," in the final analysis, every one of us. God made us so. And it is right that we should be, for if we did not have the wish to improve our individual fortunes there would be no great discoveries and inventions with which to improve the world at large. Morse invented telegraphy primarily to get himself out of poverty. Bell invented the telephone for the same reason. Yet who doesn't appreciate what an advantage it has been to the world to have those men do what they did from a selfish motive? Look at the telephone on your wall there.

And why do you want more wheat to the acre, and why do you sing praises when you find a way to get it? Because it means greater success for *you*. And yet you have served humanity, for other farmers can use that method too, and produce more wheat.

Even patriotism is selfishness. It springs from a desire to protect the country we love. And what is that country but a collection of institutions we believe in? And what are those institutions but bulwarks thrown around us *individually* to insure our personal freedom and the right to accumulate and enjoy the fruit of our individual labor?

Now, the country is full of good, strong, effective *local* farmers' organizations. For example, take the Illinois Agricultural Association. It is accomplishing splendid things. And there are others. Why can we have strong local organizations and not a strong national one? Because your local organization is close to *you*. It immediately affects your personal interests and you can *see* where it does that. Moreover, you helped build it. There is something of you in it. It started *from* you instead of *at* you.

But, you ask, Is there any likelihood of our ever having a national organization? Is it possible for us to have one in which we can see specific help for our individual problems on our individual farms?

I believe it is not only possible but highly probable that we will have this organization, and before very long. There are gentlemen who will disagree with me violently—gentlemen who say farmers never will get together because they never have got together; that they quarrel too much among themselves; that their interests are too widely separated.

Well, Germany said we never would get our men trained and to Europe in time. It never had been done and it couldn't be done. Yet it was done. As for quarreling a bit, why not? What a bore life would be if we lived in sugary sweetness with each other all the time. And as for our interests being widely separated, that's balderdash. Our interests are the commonest of common interests. A citrus grower in Florida is aiming toward exactly the same end that a corn grower in the Corn Belt or an apple grower in Oregon or a potato grower in Arostook is aiming at—better crops, better prices, better homes, better babies, better clothes. I guess we are agreed on that, aren't we? And if the right kind of a national organization will assure us these things we'll not quarrel too much about the details, will we? I think not.

I believe that in the county farm bureau you have the first great step toward a *real* national organization.

I am not alone in this. County farm bureaus in many States have been formed into state federations. These state federations now exist in enough of the great commonwealths of the nation to warrant a national federation. To go back to the county bureaus, these in turn are organized along township lines.

As to the details of how many of these county farm bureaus can be organized by you in your home county I leave that in the hands of Mr. H. C. Rogers of Mechanicsburg, Ohio, secretary and original organizer of the Ohio Farm Bureau Federation, whose article appears on another page of this issue. If there is any further information we can give you in this connection, write to him, or to me, care of FARM AND FIRESIDE, 381 Fourth Avenue, New York.

All I propose to do here is to discuss the merits of the plan, and to tell you that on the twelfth and thirteenth of November, this year, in the city of Chicago, the county and state federations of farm bureaus are going to meet to form a national organization.

If you want to know why I say that, go back to the first paragraphs of this article, where I tell you that *you* are the biggest man in American agriculture today, and that it's the things you learn on your farm that represent the really progressive steps in farming, and that the Department of Agriculture and the state experiment stations are merely your agents to collect and redistribute the knowledge of these discoveries to farmers everywhere.

I believe firmly in the federated farm bureaus as a real national farmers' organization, with real power—the power of *you*—behind it, because it is the first organization that has sprung solely and completely from *your* farm.

I can see in it a direct line of communication from you to the local, district, state, national and international problems that confront you.

I see in it that which will break down the barriers and let *your* voice be heard to some purpose in the affairs of the county, the district, the State, the nation and the world, as they affect your personal interests.

I see in it a channel through which you can have a hand in building up a real marketing system for farmers, in getting equitable taxation and fair legislation, both locally and nationally.

I see in it your means for getting before the consuming public *your* side of the production, distribution, and profit questions which are so misunderstood by that public to the end that it is prejudiced against you now whenever it takes the trouble to think seriously about you at all. Your problems are not understood by those who buy what you produce and who *should* understand them.

Of course, the machinery will not always work like greased lightning. No machinery made up of human beings ever does. One snag is that of making the organization self-supporting. You will notice in Mr. Rogers' article that the county farm bureaus as at present organized receive some state and national aid. But the amount of money required by each county bureau is not so large that it would impose any hardship on the individual members to support it out of their own pockets. And there will be other difficulties.

However, there are a great many encouraging things about this plan for a real farmers' organization. I have tried to outline some of them, but the most encouraging of them all, it seems to me, is that here is a golden chance for an organization through which *you* can speak in national terms, and the services of which you can use in building your own success on your own farm.

GEORGE MARTIN.



Milord Must Have His Mutton

ALMOST the first thing the Britisher thought of after he read that the armistice had been signed was his mutton chops. The Britisher must have his chop. And here you see how he has gone about getting it.

And gosh, but they are particular! I saw one stewing and snorting over a chop in a New York restaurant on upper Fifth Avenue the other day. He swore he could "taste the wool on the blawsted thing, y' know." He was a true disciple of his famous countryman, Sam Johnson, who invented the dictionary, and who, on being served some beef, hurled it from him, bellowing:

"'Tis worthless, ill bred, ill killed, ill dressed, and ill served! I'll have none of it!"

These sheep, photographed recently in Sussex, England, near the foot of the famous South Downs sheep country, don't look as though you could say that about them. Notice the many lambs.

THE EDITOR.

How I Buy and Handle Beef

By John F. Mommsen

EDITOR'S NOTE: The articles on these two pages are the first of a series of six dealing with your problem of feeding and marketing profitable stock. The September articles will cover hog feeding and marketing, and the October articles will tell about sheep.

I HAVE use for water—plenty of it. In fact, water is the solution of my feeding and marketing problems in connection with my business of producing cattle for market. I can see you going over this sentence to see if you have got the thing right. You have. Let me explain:

Years ago, when I started feeding cattle, I was still at home with my father. Often I asked him how long he was going to feed a bunch, and how fat he intended to make them before sending them to market.

"Son," he would say, "we'll sell the cattle when they are finished for market."

"But, Dad, how can I tell when they are in that condition?"

"Johnny, when a steer gets so fat that his back apparently sinks a little, and a hole appears in the center of it—when this indention is deep enough to hold a cup of water so that it won't run down his sides, he is ready for the block. Follow this plan and you'll never have any trouble in finding business profitable."

And in the nine years I have been in the business, I have yet to suffer a loss. I have followed this advice of my father's, and top the market at least once every year, sometimes twice, with the three loads I make annually.

When I say I have never suffered a loss in feeding I mean it. However, I have not made a profit on every load. Sometimes I only break even, but that is much better than losing money. I don't always top the market, either; but I land close to the best price, so it pays to follow his advice.

This philosophy of Dad's also gives me one more use for water.

My first feeding venture for myself was on the farm of a relative, which I rented. Profiting by what I learned while on the home farm I bought good feeding cattle. Right off I became partial to Angus cattle, and for that matter still am; but more about that later.

The second year I bought a load of blacks from a local feeder dealer. I paid $6.75 per hundredweight for the steers, which were a nice, even bunch, that I picked out of a penful. When Dad heard of the price I had paid he reprimanded me, and told the dealer he had no right to take advantage of my youth and inexperience in the ways of cattledom.

I was satisfied, however, in the selection, and the sale of the stock, also the gains made, proved it.

When the time came to market the steers, Father helped me drive them to the loading station. On the road we met the dealer who sold the feeders to me. We stopped and chatted for a moment, while he looked over the cattle.

"Johnny," he said, "the cattle did right good, and make a fine bunch. I'll buy them of you at $9.50."

"Gosh, John," exclaimed Father, evidently gasping for breath, "take it!"

I refused the offer, because I knew they would bring at least $10 on the Chicago market. Again my judgment was vindicated—the steers sold at $10.05, more than I expected, for I would have been satisfied with 10 cents a pound.

Since then Dad believes I know just a trifle about making cattle. However, it was his teaching that started me, and I always think of what he said, when I am ready to market a load of feeders.

He often told me that an animal ready for the block has two backs—one which grows on the steer, and the other put on by the feeder through the use of plenty of the right kind of feed. They are very closely related—in fact, essential to each other, and both work for your benefit on the market.

And the market, after all, tells me where I stand as a feeder. My ability is useless unless I can make a type of steer which will sell at a profit.

Marketing and feeding, because of this, go hand in hand. A man who can't make 'em can't expect to sell them successfully.

It has been my experience that the first lap in profitable feeding is buying the right kind of a steer. A load well bought is like a good start in a foot race—half the battle. Good feeders, I have found, are the best to handle. They cost more apparently; but they are the cheapest in the long run.

In the first place, I never buy awfully thin feeders. Cattle which are merely hide and bones are hard to judge—I can't figure much on their quality. I buy feeders averaging from 900 to 1,000 pounds, of good quality, and in good flesh. In a load of this kind, whether I buy them from a dealer or at the yards, I can tell the good-doing steers and leave the poor ones. If I bought thin stuff, it has been my experience two or three of them would prove to be poor-doing animals, and would not feed out economically or sell well.

Last year I had an experience of this kind. I missed the top of the market with one load by a few cents, and it was all because of four mean steers in the load. They were not only poor feeders, but also brought down the price of the whole load.

And they ate just as much feed as the others, but didn't do half so well—they were a big drawback, in fact; so it is plain why I like the steers with some meat on their frames.

I have a type of feeder in mind—a composite of all the going points in steers which I have handled during my life. I have never been able to get a load of feeders which measured up to my ideal, but it stands by me, and as near as possible I get cattle which measure up to the standard. I want Angus cattle if I can get them, because I like the blacks, and think them better than either the Shorthorns or Herefords.

Angus cattle get into very fine market condition, make good gains, and are very economical feeders.

In buying feeders I want cattle which are built like a block set on four pins. I want them as low-hung as possible. The lanky kind, I find, don't do as well. I want a steer which is straight along the back, and not cut up in the flank. The animal must have a good, wide back, a thick loin, and deep, well-arched ribs. If the first back is good it is an easy matter to put on the second story.

The steer must carry out well behind. This is the thing I have against Herefords. They narrow off at the rump, and I don't want a steer whose tailhead sticks up like a flagpole. The front end of a steer is important too. The chest must be wide, and there must be no falling away behind the shoulders. The best-doing steers have large heart girths and roomy middles, so they can care for lots of cheap roughness.

The shoulders must not be too heavy, nor too prominent and rough. They should be nice and round on top, and fit snugly to the body. The neck must be short and thick, as neck meat does not bring very much over the block, and, besides, the steer carrying a preponderance of beef blood has a short, thick neck, which blends nicely onto the shoulders.

A steer's head is a very important thing, especially when one is buying feeding cattle. I insist on steers with short heads, tapering a little toward the muzzle. The head must be masculine, and not too rough. I like a head to be wide between a pair of large, quiet, well-set eyes that look alive but not wild. The steer which has a wild eye usually is nervous, and does not put on fat as economically as the peaceful, yet alive kind.

The muzzle, or mouth, tells whether or not the steer is a good feeder, so it should be of medium width, and the lips not too thick.

Early this year a batch of my cattle I marketed sold for $20.25 a hundredweight. They topped the Chicago market, and sold within a quarter of a cent of the highest priced cattle up to the time of the sale. These were Angus steers which averaged 1,385 pounds.

I bought these cattle at home, averaging 950 pounds, costing $13.50. I had these steers for six and a half months, two months of which they were running on clover and timothy aftermath, picking up feed which otherwise would go to waste. During this time I figured they gained about 90 pounds each.

Then I put them on a ration of shelled corn, oats, oilmeal, and timothy and clover in limited quantities, with a little fodder now and then. I increased the feed of shelled corn until they were getting one-half bushel per head per day, and one bushel of oats to the bunch. The first two months of the feeding period I fed 2½ pounds per head daily of oilmeal, and after that three pounds.

I curried these cattle, as I do all others I feed. People think the idea is foolish and a waste of time, but they say currying saves half the horse's feed, and I believe it should do the steers some good. People coming past the farm see me currying the cattle, and laugh. In town they kid me about it; but, still and all, I think it is worth while.

It means money to me, for it makes the hair coat fine and glossy, and brings out the quality of the steers. They go to market and arrive there nice and clean. They have no rough hair coats, nor a few pounds of dried mud hanging to their stomachs or rounds. And I know for a fact that when a steer has five or six pounds of mud hanging from him that buyers take off a little on the price; and you may be sure they make an allowance wide enough to get all of the dirt, too. And buyers have a right to do this. The mud can't be sold as food, and they pay good money for it as beef.

The steers like to be curried, and the currying makes every steer a friend of mine. Consequently they don't become frightened when I feed or work around them. I make it a point never to disturb my cattle, for a nervous, unsettled steer does not put on fat economically or quickly. And they use up more feed in energy when they are restless. This may sound trivial, but when you put all of these little things together they amount to a lot in the end. On an average, my steers gain three pounds a day while on feed.

I generally start the steers in pasture in the fall and spring, and in the winter on roughness, letting them eat a bit and become used to their new surroundings. The first 50 to 75 pounds can be made cheaply in this manner while they are settling down.

I have a farm of 170 acres, and devote most of it to raising stuff to feed. I exercise the greatest care in buying feeders; but if they don't prove out as I figured I don't feed the stock to the limit, because I know the return will not be in proportion.

If there is such a thing as a cattlewoman, my wife is one. Her father was and still is one of the best cattle feeders in Iowa, and all of her relatives are too. So, naturally, it runs in the family. When I went to market last fall with a bunch of cattle, I had another load at home on grass.

As soon as I left, without me knowing it, she started the cattle on feed. Within a few days, while I was gone, she had them eating nicely. Imagine my surprise when I got home.

And the boy is going to be a dandy stockman. He's only eight now. I had a few calves around, and he had sole care of them. He made a nice job of them, and later on I plan to start him in the business. By sharing the responsibility with him I not only figure to teach him the business, but later on he won't have a hankering for city life, either.

I can send him out to look at the stock toward evening if I am busy, and he soon lets me know if they are eating or resting easy. If anything is wrong that he can't right, he rushes back to the house with the news.

In the spring of the year I grind the corn for the cattle. I figure it doesn't need it in the fall and winter, because there is considerable moisture in the grain. Toward spring, however, it begins to get dry and hard, and the cattle can't eat it so well. Then I make a ration of ground corn and cobmeal. Also, [CONTINUED ON PAGE 19



John Mommsen and his wife and son, who have helped him make a big success of feeding cattle

Points About Picking Feeders That Will Make You Money

DON'T pick them too thin; you can't judge their quality. Nine hundred to one thousand pounds is about right. Have them blocky and low-hung, straight along the back, not cut up in the flank; thick-loined, well-arched ribs.

A steer's head is very important. Insist on a short head, tapering toward the muzzle—a head masculine and not too rough, and wide between large, quiet, well-set eyes that look alive but not wild. The steer with a wild eye is nervous and doesn't put on fat economically. Have the muzzle of medium width, with lips not too thick.

These are some of the things that experience has taught John Mommsen to look for in profitable feeders. And, inasmuch as he frequently tops the Chicago market with his stuff from Vernon Prairie Stock Farm at Miles, Iowa, what he says ought to be worth paying some attention to.

THE EDITOR.

I Can Top the Market With

By Thomas J. Delohery

IN THE article on the opposite page John Mommsen tells you something about making cattle for market. In this article I am going to try to tell you, from my experience of eight years at the Chicago yards, and from the facts I have just gathered in a special search for the benefit of readers of FARM AND FIRESIDE, what kind of cattle you can feed that the packer will pay you the most money for.

The other day I was discussing the cattle situation with an Iowa feeder. He told me how he made money on his stock by hitting a high market, and that if he hadn't taken a chance and fed his stuff a month longer he would have lost money. The reason for this was the increase in the price he received over what he would have had to take if he had marketed when he first intended to.

I have heard cattle-feeding called a gamble. Cattle-feeding is not a gamble; the marketing is where the element of chance enters the business. There is no speculation in feeding; it is plain that steers will gain if fed properly and amply. And marketing is where the feeder finds out if his efforts have been wasted, and if, instead of profit, he must take a loss.

Some men, by studying the trade, have reduced the gambling element in their marketing. They have, by inquiries and other means, found out what the packer wants, and have produced accordingly. Other men, through their reputation as makers of first-class stuff, have made marketing easy.

"I'm puzzled," said one feeder to me. 'I want to buy a load of feeders to take back home, but I don't know what kind to buy. I wish the packers would tell me in advance what they want."

I have heard this information asked for the whole eight years I have been on the Chicago stockyards. In normal times it would seem as though this would be a fine field for the packer to gain the confidence of the farmer.

Because of the lack of that information you can't help but think that live-stock production, so far as marketing is concerned, is a blind game. The farmer has mastered the production end of the business, but he knows very little of the marketing end. It is partially the farmer's fault, but the great blame, as I see it, lies with the packer. Surely he could give the feeder some information which would guide him in production, and thus solve the selling problem.

And I often wondered if I couldn't get something from the packer which would help the producer. Accordingly, when the editor of FARM AND FIRESIDE asked me to see if I could, I went to the packing house and found many things which ought to help you as a producer.

One thing stands out: the producer's interest in cattle usually ends with the 'weigh 'em" order from the buyer, and the packer has been too busy increasing the efficiency of his plant to give the feeder much thought.

At Armour's I met Dr. R. J. H. De Loach, former head of the Georgia Experiment Station, and now chief of the farm research division of that firm. He was quite interested in my mission, and gave me some very interesting information.

"The farmer produces all kinds of cattle," I said to him, by way of introduction, "but he doesn't know exactly what the packer wants—that is, he hasn't a very definite idea of what the consumer calls for, and the kind of animal which will make him the most money."

He listened intently. After I had finished he remained quiet for a time, but was writing something on a pad of paper. When he finished he handed it to me.

"This sketch shows we are now getting only 10 per cent of the prime cattle," he said. "The other 90 per cent are made up of 50 per cent medium to common, and 40 per cent of the inferior and riff-raff canning stuff, you might call it. This is out of proportion. We should have 20 per cent of the prime cattle, 60 per cent of the medium stock, and 20 per cent of the poor stock.

"The heavy supply of inferior cattle is perhaps due to the farmer's unloading his poorest breeding stock. We buy this as an inducement for him to get rid of it, thus making way for a better class of cattle."

"I notice you double the percentage of the prime cattle," I interrupted. "Isn't it a fact that the farmer doesn't make very much money in producing this grade?"

"Yes," he replied," it is true; but we have a market for considerably more of the prime stock that I am advocating. With a bigger demand than we have supply it means competition and good prices.

"The consumer, finding he cannot get the prime beef, will take the next best thing offered. This is the medium beef. Naturally it helps the price of this kind of meat; and it is the medium stock the farmer is finding most profitable.

"The idea is merely like a grocer cutting the price on one article in order to get you into his store, in the hope that you will purchase something else to take care of the loss incurred in the sale of the bargain.



You will please the packer with this kind of beef

You Can't Sell a Chunk of Mud for a Pound of Beef

MOMMSEN says the neighbors around his stock farm at Miles, Iowa, laugh at him because he keeps his feeders clean. He is known over the countryside as "The man who curries his cattle." But when he gets those cattle to market he has the laugh on the neighbors, though they may not know it. Read what he says:

"It means money to me, for it makes the hair coat fine and glossy, and brings out the quality of the steers. They have no five or six pounds of dried mud hanging to their stomachs or rounds. And I know that when they do have the buyers make allowance in their bid for all the dirt, and they allow enough, you bet, too. You can't sell a chunk of mud for a pound of beef."

After all, it doesn't pay to laugh at a man simply because he's doing something you don't understand. THE EDITOR.

"Beyond a doubt, the medium grade of cattle is the most profitable to the feeder. This class of stuff requires less corn and high-priced feeds than the prime stock, and the cost of production is smaller. However, it is the prime stuff which makes the medium grades profitable."

As I observed, this sort of thing has been going on for the past few years. I can remember when the producer found it unprofitable to raise the medium cattle—because there was plenty of prime cattle and the range of prices was very wide.

Medium cattle comprise the great bulk of the supply, and in a way this is the essential production.

When one studies the situation it is quite evident that the most intelligent production and marketing of cattle involves a knowledge of the consumptive market. The farmer has not a chance to study this thing.

It is not amiss to say that the retail and wholesale demand for meat governs the price paid for the live product. Failing to take into consideration this feature in studying marketing, one ignores perhaps the most important phase of the business.

The packer buys his stuff from the view-point of how it will dress, and look on the hooks. The following table shows the yield of the various cuts of meat from a 1,200 pound steer dressing 60 per cent, together with the price for the wholesale cuts of beef. These prices, of course, are not current, but they show the difference in what cuts are worth:

		Grade		
Wholesale cuts	*Wt. in lbs.*	1	2	3
Round	100	$.18	$.17	$.11½
Loin	60	.35	.24	.14
Flank	10	.14	.13	.11½
Rib	35	.30	.20	.12
Plate*	40	.15	.14½	.10
Chuck	82	.16	.14½	.10
Shank	18	.09	.09	.09
Misc.	15	...	...	...

*Includes navel and brisket.

This table shows why a steer having well-developed loins and ribs brings more than another not so fat over these cuts. It also bears out the following conversation which I heard at the yards one day. The principals were Charlie Robinson, veteran cattle salesman, and a farmer who had shipped some cattle to him:

"Mr. Robinson, will you tell me why you are asking more for this pen of steers than those in the next lot?" said the farmer. "I can't see $2 difference in the two pens, yet I heard you asking $19.75 for this load and $17.75 for the other."

Charlie asked the farmer to climb on the fence separating the two pens, so that he could get a good view of both loads of cattle. Then he went into detail from a packer's viewpoint, showing why one load was better than the other.

"In the first place," he said, "notice the quality of the two loads. Perhaps you had better jump down here and feel the hides of this load, and then handle the other cattle." The farmer did.

"Notice the difference?" he was asked.

"Yes; one load is soft and pliable, the other a bit hard."

"Another way of telling quality," went on Mr. Robinson, "is by looking at the bone. This load is medium-sized and nicely shaped, the other is rough. And note the hair—one is silky and bright, the other dull and hard looking.

"The fat on this load is evenly distributed, while on the other it is in bunches, and part of the ribs are not covered at all. The rounds of these steers are thick and meaty, the others are thin and the rump narrows off. The ideal steer is rectangular, and even from front to rear.

"Notice how this load is covered over the ribs and loins. Here is where you get your porterhouse steaks and fancy cuts. You know what they cost, for you have just returned from the restaurant; and when you go home to-night, if you eat in the dining car, your check will tell you further why there is a difference.

"When this load is killed it will be a nice set of carcasses. I believe the dressing per cent will be 60 or a little better. The other load will make about 55—maybe a bit more.

"The best load will be evenly covered with fat and have very little waste. The meat will be bright and well marbled—that is, the fat will be in veins between the lean; and this makes the meat appetizing, adds quality, and makes it better selling. The other load will be rough, and the fat probably will be all on the outside, with very little marbling. This outside layer of fat, if too thick, is a waste, because it must be cut off."

This discussion went on for nearly an hour, and the farmer surely learned something.

I said that sometimes a man's reputation takes care of his marketing. I have seen numerous instances of this, and will cite you one which took place recently: George Adams was selling a load of cattle shipped by A. W. Ebersole of Dekalb County, Missouri, to Stanley James, a buyer for Swift & Company.

"What'll you give me for them?" asked Mr. Adams.

"Nineteen cents," replied James.

"Put on a quarter; they are prime stuff."

"No, the best I can do is a dime. Who fed the cattle?"

"I did," said Mr. Ebersole, who was standing on the fence.

"Didn't I buy a load of your cattle a few months ago?" said James.

"You did," replied the shipper.

"All right, make it $19.25, and hurry up and weigh them before my boss comes around. Your cattle the last time killed out fine, but that boss of mine is a hard bird."

Here's where Mr. Ebersole's reputation came in handy. Other buyers had only bid $19 for his cattle, and wouldn't go higher; but Mr. James remembered, and raised the bid a quarter, which meant about $60 on the load, or enough to pay the cost of marketing and railroad freight.

"We are always on the lookout for the producers of good quality beef," said Tim Ingwersen of Swift & Co. "The man who can make cattle which dress out a high percentage of the best meat will find us active bidders for his stuff. We are willing to pay a premium to a man who we know makes the cattle."

"The prime beef I speak of doesn't necessarily need to be heavy stuff," continued Dr. De Loach. "Well finished two- and three-year-old cattle, weighing from 1,000 to 1,200 pounds, will do. Of course, we want some heavy cattle too.

"We need a balanced supply of beef, and the percentages I spoke of will give us this. Right now the receipts are not balanced. Just yesterday I spent a day in the yards, and I was surprised to find so many inferior cattle. It takes time to manufacture and sell this sort of stuff, while the other beef has a good and ready sale.

"Quality, more than any other thing, sells beef. The well-marbled piece of meat which comes from the best grades finds a ready sale. The products of the medium grade, too, sell well.

"Feed has a considerable bearing on the carcass. Grass gives meat a watery finish, and it sells at a discount. Too much green silage produces the same effect. Corn, on the other hand, makes a fine white fat, and the lean is interspersed with thin layers of fat. The color of the best meat is a bright red. Cottonseed meal firms up the fat, and adds to the quality.

"The reason I [CONTINUED ON PAGE 19]

Before You Spend Your Money This Way Think a Long, Long Time

By T. C. Hart

I REMEMBER very well—and I have no doubt you remember too—when I was a youngster, of going out into the woods after wild flowers, and wanting the flowers that were just a little farther on. The ones over by that other stump seemed a little bigger and a little brighter. I have raced for that other better appearing patch, and found when I got there that the flowers were just the same as the ones I had left.

And I found, too, that the ones who stayed back in the first patches had much larger and prettier bunches of flowers at the end of the trip than I had.

For some reason it seems always to be something somewhere else that is most attractive to many—some other line of work. That lure has brought many men to ultimate great success. But for countless of thousands of others it has proved their downfall.

This lure is particularly strong in us who own land, and I am writing this article to show you, if you are touched with this fever, how my own experience has taught me the fallacy of going into any land proposition that looks good from far away. The time, energy, and money some of us put into these "wonderful opportunities" far away, if devoted to discovering and developing the opportunities we have overlooked right where we are, would make us prosperous and successful much more quickly.

If we are landowners in the corn belt of Illinois or Iowa we are ready to listen to the fellow who is promoting some land scheme in the Dakotas, in California, or in Texas or Alabama, and the same is true if we are anywhere else.

If you don't like the section of the country you are in, and want to make a change, make a change by all means—don't be a square peg in a round hole if you can help it. But before you make a change, and before you let any land agent hook you, for goodness' sake conduct a careful investigation of the proposition.

Some few years ago I went South to look after the holdings of some Northern people who had become interested in pecan land propositions. I notice that the pecan-grove promoters have again become busy, and are carrying on extensive advertising campaigns.

I will give a few of my experiences to illustrate what a purchaser who has listened to the lure of the land and the siren song of the promoter of land in a distant part of the country is liable to find.

I believe that my experiences, with a few minor changes, would also apply to many other promoted districts. I have traveled through the apple country of some of the irrigated districts of the West, and through other promoted sections of the country, and I know them all.

I was born and raised in the corn-belt country of the Middle West. I had no more idea about how to grow anything in the South than a Southern farmer had about how to grow anything on the black soil of the Corn Belt. But I bought Southern land. The reason I did so was this: I had a friend who was a steamboat captain on Mobile Bay at one time. He became greatly interested in the land of that Gulf Coast country and determined to purchase some.

It was cut-over pine land, and before it could be farmed it had to be cleaned of second growth, stumps, and fallen logs.

He found that a large corporation with headquarters in Chicago owned the land, they having formerly used it for logging and turpentine.

Before he left they had formed a development company, to divide the land into small lots of 20 to 40 acres each, and sell them in those small-sized tracts. My friend was to be the selling agent, and was to receive for his services an outlandishly high commission—something like 40 per cent I think it was. The land was to be sold at $25 an acre—at that time land in that locality was selling at from $2 to $10 an acre in the open market.

But these people did not propose to sell to people of that section of the country. The land was to be sold to Northern people for the raising of paper-shell pecans.

Wild pecans were a good crop in that section—growing wild in the woods—so the promoters thought that by setting out the paper-shell pecan and giving it proper care great things could be accomplished.

The pecan boom was on all over the South at that time—Florida, Georgia, Alabama, and Mississippi—plantations being sold chiefly to people from the North.

My land-agent friend sold some 1,200 acres of his tract to one of these pecan plantation promotion companies.

When he told me about his big sale and showed me where it was on the map, I figured that getting in on the ground floor and being close to such a big company ought to be a good thing, so I bought from the map a 25-acre tract directly across a proposed road from the big corporation and on one of the main county roads.

The big corporation started in at once to clear land and sell orchards—pecan orchards—or I should say that they started in to sell orchards and then to clear the land for them. Their plan was to sell on a five-year-payment plan at from $250 to $500 an acre: they were to care for the orchards for five years and then turn them over to the purchasers—a producing proposition. Besides selling this big tract to this promotion company the land agent sold many small tracts to independent buyers who paid for having their own land cleared, planted, and cared for. And it was here that I came into the game. My land-agent friend couldn't sell land in the North and clear and plant and care for it a thousand miles away, so he offered me the job of looking after the Southern end of it. I was to take care of the land for the various non-resident owners, and was to be paid by them.

I wanted to go South, and I thought that in this job I saw a chance of having something to do to pay expenses while I was bringing my own wild land under cultivation. So South I went.

When I got there I found a pretty wild-looking country—not much of it was cleared or under cultivation. Here and there would be a break in the woods where a pecan grove was being started, or where a native Southerner had a little farm.

I liked the country, and I thought I saw possibilities in it, but the pecan orchard didn't have a place in my scheme of things. When I saw what the big promotion crowd were selling at from $250 to $500 an acre it made me faint. They had cleared the land and broken it, and were planting trees right in the fresh breaking—no preparation, no cropping first—just sticking those little trees into the ground which had been turned for the first time in its history. Much of the ground was sour and poorly drained, or not drained at all. Water stood on some of it for weeks at a time, yet as soon as possible here they were planting trees—planting trees which never could live and which any human being with a grain of sense would know couldn't live.

Planting trees which in five years were supposed to be bearing a paying crop!

What I saw made my heart ache for the people up in the North who were paying for those pecan groves. I had seen the company prospectus I had been in the finely appointed offices in Chicago. had heard them explain to rapt and credulous listeners how many pounds of nuts pecan tree would yield each year—from it fifth year on, and at so much per pound and with so many trees per acre—they would figure up the prospective purchaser's profit on a five or ten acre grove. Oh, it sounded fine! The purchaser with the light of longing, the lure of the great unknown, and the call of the land in their eyes, would hesitate, think it over, talk some more, and then buy.

Many of them never saw their land before starting to pay those huge prices for it. Many that did see it didn't realize what they were seeing. The plantation manager would entertain them royally, drive them around the country to see the old native pecan trees, and the prospective purchaser would go home satisfied he had got in on a winner and tell his friends all about it and urge them to buy.

I have seen fellows who knew that apple orchards and cherry orchards and peach orchards could not be depended upon to bear the same crop on each and every tree, who would put absolute faith in what the pecan-boom salesman told them about what their pecan trees would do.

Those fellows knew their ground on the apple, cherry, or peach proposition, and the salesman had told them the same fair story about them [CONTINUED ON PAGE 2



DRAWING BY LEJAREN À HILLER

Before you make a change, and before you let any land agent hook you, for goodness' sake conduct a careful investigation of the proposition!

How to Find Out the Truth About a Land Proposition

IF a land-promotion proposition really looks good to you—and there *are* a *few* good ones—take these precautions before putting your money into it:

Write your agricultural stations, both national and state, and ask them what they think of such a scheme in that locality. Talk to your own county agent, and get him to put you in touch with a county agent where the land is located. He *knows!*

Visit the locality if possible. Get away from the land agent. Talk to solid business men in near-by towns. Talk to the natives, and look out for "contented" farmers who are "planted" there for your special benefit.

Never buy from a map and a prospectus.

Look out for "planted" farms, developed as show places at far greater cost than the average settler can afford. Get away from the agent, and make your own investigation. Test the soil.

Are there good schools near? Good markets? What about climate, rainfall, cost of transportation?

Use your head, don't lose your sense of values, and don't buy on the spur of the moment. Go home and think it over. THE EDITOR.

Cotton, Dairy, and Hog Farmers Unite to Fight Big Oil Imports

By Charles W. Holman

IF YOU are a stockman, a hog feeder, a dairyman, or a cotton-grower, I have something very interesting to tell you about the future prosperity of your affairs and what you can do to bring it about.

In Washington, the other day, I attended a remarkable meeting of farm leaders. They had assembled from cotton, dairy and swine growing regions to work out a plan of joint action to bar Oriental vegetable oils from the list of free exports.

This meeting was of particular interest to me, as I had but recently returned from the Orient, where I was sent to study the production and marketing of these oils for the U. S. Food Administration. When I went out to Japan and Manchuria in the spring of 1918, Mr. Hoover had need of information as to available stocks and crop prospects, for he had in mind a possible shortage of commercial fats and the possibility that the Government might have to take the entire import question in hand just as he had taken over the purchase and distribution of sugar. I was surprised to discover that North Manchuria is larger than Texas, while you can set the State of Minnesota down in South Manchuria and then have some land to spare on which Chinese can grow crops. The combined area is 355,600 square miles. On a fast train I was able to go from Dairen to Changchun in twenty-five hours, and up to Harbin in another ten. It took fully forty hours to cross from Manchuria station on the west to Pogranitchnya on the east, not counting station stops.

After I had familiarized myself with the problem and got the facts over there as to the stocks that represented an accumulated surplus over the manufacturing capacity of Japan and Manchuria, I cabled the Goverment, urging that Uncle Sam go into the bean-buying business and use the port of Vladivostok to ship beans to the United States to be milled by our southern cottonseed mills. Then I followed my cable with a long detailed report.

A few weeks before the opening of the 1918 cotton crop I was surprised to receive a cable from Mr. Hoover saying that American conditions had changed and would not warrant the Government's entering the market.

What had happened?

Just this: Our cotton crop coming in was slightly in excess of the previous year's crop. It had been produced at a greatly increased cost, and circumstances made it necessary for the Food Administrator to call in the producing, milling, and refining interests to reach an agreement upon a price for cottonseed and a scale of prices for its derivatives.

Farmers Aroused Over Vegetable Oil Situation

Also, during the summer the Japanese had almost strained themselves in shipping into this country vegetable oils. These oils were bound to have a depressing effect upon the lard, lard substitute, and butter markets, in a way that would discourage the productive industries of this country. So the facts that I had gathered, instead of being used for purchasing, proved valuable in case the Government might find it necessary to declare an embargo on Oriental oils to protect the price agreement. Several times during the past winter such an embargo loomed big in official circles.

But the meeting of farmers' representatives in Washington had to do with the future policy of the Government from now on. They were aroused over the situation. At first it seemed strange to me that the cotton farmer, the dairyman, and the hog producer could work together. There was a time when they did not think their interests were so much in common. That was in the early days of the cottonseed-oil industry, when the swine man looked askance at lard substitutes, and the dairyman had nervous shivers every time the word "margarine" was uttered.

But domestic consumption of the lard and butter substitutes has so increased that price currents affecting them also affect the prices of butter and lard. That is to say, if something should happen to make cotton oil fall notably in price, lard substitutes would also fall. If lard did not immediately follow, more and more people would use the substitutes until lard would have to follow the downward trend; likewise with butter and margarines.

In that fact we have the key to this new bond of affection which the three groups have discovered for each other. The Oriental vegetable oils hit cotton oil hardest, being excellent substitutes for it in many ways. They also hit the dairy industry. This reflects itself back to the hog man, who is to-day looking pretty far beyond his nose.

There is another angle of this complex situation brought out at that meeting by a dairyman. The tinned-milk industry is now largely in the control of the Chicago packers, who are developing a trade with the Orient and South America from whence these cheap vegetable oils will come largely in the future. The packers are also great makers of butter substitutes. By bringing in cheaper raw products for butterines they can depress the butter market. Low prices for butter work back to lower prices for milk. Low prices for milk mean cheaper costs in producing the tinned milks that are to go to the markets of distant lands where people are accustomed to buying cheaply what they use.

The effect, you ask? Slightly larger profits for a few, and a weakened dairy industry.

Prior to the armistice, although American firms were buying heavily, and there was much talk of the Government's taking over the arrangements for importing these oils, in order to fill the commercial fat vacuum in Europe, American producing interests were not so uneasy. The Food Administration was sustaining the hog market by a minimum guaranteed price, and the cottonseed market by an agreed price. It also had in operation regional boards trying to arrive at a satisfactory price for milk. In those days the farmer could adopt a "we should worry" attitude. It did not matter much to him that the imports of vegetable oils were of so great a volume. But mark how the coming of peace changed the outlook. The vegetable oil situation became a serious one for American producing interests the day the armistice was signed.



HERE is a party of Americans, including the author, at one of the ranch houses on the 14,000 acres under American cultivation on the lower Sungari River. Imagine yourself in their place. They do their farming *more than 400 miles from a railroad*, near the Siberian border.

The party you see here is a high Manchurian court-martial, and the bald-headed Chinaman in the flowing gown, sitting beside Mr. Holman in the center, is the district magistrate, who has just come over to settle the fate of several bandits who raided the American company's place. These raiders were "Hung Hutses," and the battle with them lasted for half an hour.

Farming in Manchuria, you see, has its exciting moments, even as farming on the Mexican border in this country.

In the second row in the picture is Professor Charles Tuck, former acting head of Cornell University Extension Department, who has been in charge of the American acreage in Manchuria for the last four years.

THE EDITOR.



Breaking wheat land to follow with soybeans in Manchuria. Notice the wooden plow

Farmers Like Maintenance of Minimum Prices

Take cottonseed oil for example, as it must bear the brunt of the present battle with Oriental imported oils. During the past winter and spring the Food Administration has chaperoned an agreement fixing the price of cottonseed at $70 a ton, and the price of crude and refined by-products of cottonseed at schedules based upon the price to the farmer of the seed at the mill. Now $70 a ton is a rattling good price for cottonseed, which no cotton farmer can deny. But they will tell you down South that since the Civil War, and until the second year of our big war, the cotton crop was produced and marketed at prices under the cost of production, so that a little continued prosperity for that section will do no harm. This agreement was very popular with the farmers, and several times their representatives in session with the crushing and refining interests have stoutly stood for its maintenance even so late in the season as the meeting held in Washington April 25th of this year.

The Food Administration sat on the price lid tightly during all the time, but with the coming of fall and through the winter it was very difficult to do so on account of the flood of cheaper oils from the Orient. After the signing of the armistice the Japanese dropped their ocean freight rates which had formerly absorbed a large part of the differential between Oriental and American production costs. This, together with the accumulation of stocks in the Orient, brought a pressure upon the American oil market which was also reflected in a changed attitude of the European buyers toward fats of all kinds.

So the cotton, live-stock and dairy interests are up in arms against further unrestricted importations of vegetable oils to this country. They have joined forces for a big fight which they will wage in Washington when the next Congress convenes. They fired their first big gun at the February meeting of the National Board of Farm Organizations in Washington. This board went on record in no uncertain words by saying:

"We urge the immediate investigation by Congress of the unusually large importations of Oriental vegetable oil, and ask that an embargo be laid on the further importation of such oils until such a time as remedial legislation may be enacted in the form of a duty or tariff tax.

"We urge this action in order that the dairying interests, the live-stock interests, and the vegetable-oil interests of the United States may be protected against the cheap labor and low standard of living of the Oriental countries."

On the other side of the controversy will probably be arrayed the big packers, large soap and paint manufacturing concerns, munition makers who use by-products of the vegetable oils, the consuming public that is hunting for the grail of lower living costs, and the Oriental exporters who have oil to sell. The tariff on these oils will cut considerably into the profits of the Oriental firms, disrupt their plans, and bring about new trade adjustments. On the other hand, a continuation of the present policy may bring some relief to Mr. Ultimate Consumer, provided the profit differential is not absorbed before he gets the product.

Manchuria in the Spotlight

Prominent among these oils is that of the soybean, which comes mainly from Manchuria. The port of Dairen alone, during the calendar year of 1918, shipped direct to the United States more than 128,000 tons of this oil—approximately 85 per cent of the total export movement through that port. Much of the remaining 15 per cent and a large percentage of the oil extracted from the beans sent from Dairen to Japan also reached America. [CONTINUED ON PAGE 39]

How You Can Increase Your Wheat Yield Per Acre

Being a Few Points That Some of Us Neglect or Overlook That Would Mean More Money in Our Pockets if We Practiced Them

By Trell W. Yocum

HERE'S part of a letter from J. F. M. of Crawford County, Indiana. It is one of several we have received asking similar questions; and, thinking there might be something in our answers that you could use to increase your wheat yield per acre, we decided to get these points out in front here where you can all see them.

"During the war, when the Department of Agriculture and the Food Administration were asking for increased wheat production," writes J. F. M., "I did the same as all patriotic farmers—complied with their request. It wasn't the easiest thing in the world for us to do this, for it meant the breaking of rotations which we had practiced for years. With the war over, all of us are going to try to get back to our old rotations.

"Personally, I am not going to plant as much wheat as I did the past two years; but, on the other hand, I am not going to swing to the opposite extreme and sow a minimum acreage. I want to do the sane thing by sowing an average acreage, and re-establish my former rotations. I want to do more than raise a pre-war-sized crop, however. I want to increase my yield per acre, and I believe that you can help me. I want especially to know about the use of fertilizers for wheat, and also about the danger of the Hessian fly. I will thank you for an early answer."

Why an Illinois Farmer's Wheat Outyields His Neighbor's

There would be less frequent losses from drought and better wheat crops would be turned out if the importance of thorough tillage were more generally understood and proper methods of seed-bed preparations were practiced more commonly throughout the Winter-Wheat Belt. Too often the mistake is made of thinking that there will always be enough moisture for the greatest growth, with the result that short crops are harvested when more attention to the saving of moisture would have assured good yields.

In this connection I often think of two men who have adjoining farms in Livingston County, Illinois. Both grow wheat in rotation with oats, yet the wheat yield on one farm invariably exceeds that on the other. One day I asked the more successful grower why it was that he usually "licked" his neighbor in growing wheat.

"Well," he replied, "I don't lay it to better soil or better seed or better fertilizers. The place where I beat Charlie T— is by turning under the stubble as soon as I have my oats off. I harrow what has been turned under the same day. But I don't stop there. Before sowing time I go over the field several times with the disk, drag, or roller so as to kill off the weeds, to settle the subsoil, and to keep a mulch on top. Charlie doesn't plow till about two weeks before sowing his wheat, and as a result he loses the moisture while I save it for my crop."

Where a cultivated crop, such as corn, precedes wheat in the rotation, frequent cultivation given to this crop will save moisture and maintain a soil mulch. Where level cultivation has been practiced, disking and harrowing is usually all that is necessary after removing the crop. If weeds are present, however, it may be advisable to plow shallow, the disk preceding and following the plow.

Seed—Its Preparation for Planting

Home-grown wheat should be used as seed, for it has been shown by experiment that seed acclimated in a locality generally gives better yields than seed of the same variety brought from a distance. Fanning and grading the seed before sowing should always be done, for it will remove broken, immature and shriveled grains, weed seeds, and all foreign material. Smut balls and many grains affected by scab will be removed by the fanning mill, as these are lighter than sound grain.

Where stinking smut and loose smut are present, seed wheat should be treated with formalin. The method is described in Farmers' Bulletin 939, and may be obtained free of charge by writing to the U. S. Department of Agriculture, Bureau of Publications, Washington, D. C.



This is how one Illinois farmer makes his wheat crops surpass those of his neighbors. His oats stubble is turned over immediately after the crop is removed and the soil moisture saved

I doubt that anyone will question the advisability of drilling instead of broadcasting wheat. More uniform stands are secured with less seed, and winter resistance is greater, where drills are used for seeding. In well-prepared soil it makes little difference whether a shoe drill, disk drill, or hoe drill is used. Except in loose, dry soil it is seldom a good practice to plant at a greater depth than three inches, while from two to three inches is usually better.

Hessian Fly and Time of Seeding

Under ordinary conditions, and in the greater part of the Winter-Wheat Belt, about six pecks is the usual quantity of wheat sown per acre. On the Great Plains, however, from three to four pecks per acre is the usual rate of seeding. These figures may vary according to the size of kernel of the variety used, condition of the seed bed, the fertility and character of the soil, and the date of seeding.

I am glad that J. F. M. asked particularly about the Hessian fly. According to recent figures it is estimated that the Hessian fly causes an annual loss of 40,000,000 bushels of wheat. You can figure what this would amount to in dollars and cents at current wheat prices. From what I had heard about the damage done by this insect I imagined it to be about the size of a bumblebee or larger. The first one I saw gave me quite a surprise, for I found it a dainty, dark-colored gnat not over one-eighth of an inch long, and resembling in many ways a small mosquito. The insect is usually found at the base of young wheat plants in the form of a footless maggot, or larva, or in what is known as the flaxseed state, which corresponds to the cocoon state of other insects. The injury to the wheat plant is done when it is in the maggot state, for it then feeds on the tissues and juices, and eventually destroys the plant.

To avoid the Hessian fly, seeding should be delayed as long as possible. The first frost in the fall destroys most of these insects, and thus greatly reduces the damage which they may inflict. All wheat growers in a community should cooperate in the late sowing of wheat, together with a systematic destruction of stubble or other breeding places of the insect. The actual date for safe planting will vary with the season and the latitude; but if the right time be selected, neither early enough to be attacked by the fly nor yet so late as to cause danger of winter-killing, it is estimated that probably four-fifths of the injury to winter wheat may be avoided.

Risks of late seeding may be greatly lessened by providing a firm, well-drained seed bed, finely worked on top, in which there is plenty of moisture and available plant food. This will assure quick germination of the seed and rapid growth of the seedlings, so that the crop will enter winter in as good condition as those sown earlier but less favorably.

The exact time for sowing wheat cannot be definitely specified for the extensive area covered by this discussion. For the proper time for your own farm it is best to consult your county agent, your state experiment station, or write to the Department of Agriculture, Washington, D. C.

Fertilizers are rarely used on the Great Plains in connection with the wheat crop, for the soils there are generally rich. Of the older agricultural soils suited to winter-wheat growing there are few on which fertilizers of proper composition will not yield a profit when applied in connection with good farm practice.

What is the object of fertilization? I have never forgotten my old agronomy teacher's answer to that question as we looked at the test plots at the experiment farm:

"We add fertilizer chiefly to give a balanced ration for the growing plants. It is a waste of time and money to add an element already available in sufficient amounts, but common sense will tell you that it is necessary to supply in the fertilizer those elements of plant food which are not found in sufficient quantity in the soil."

His statement on that point is as simple and direct as I have ever heard.

What Fertilizers for Wheat?

Soil constituents which are often deficient are nitrogen, phosphorus, potassium, calcium (lime), and humus, or organic matter. Nitrogen is found in manure and in nitrate fertilizers, but the principal source is from the air. It can be obtained from the air very cheaply by growing legumes, such as clover, alfalfa, soybeans and cowpeas, in rotation or as catch crops. Phosphorus is usually present in insufficient amounts in the older wheat soils, and must be supplied by the addition of some form of phosphatic fertilizer, such as acid phosphate, bone meal, rock phosphate (floats), or basic slag. As a rule, potassium is not ordinarily deficient, and can be made available through the decay of manure or plant remains, but when absent or not readily available it is supplied by the use of a potassium salt commonly known as kainite. Calcium is supplied as lime or limestone to correct acidity, if necessary, and also as a plant food. Stable or barnyard manure and green manure (green crops turned under) are the sources of humus.

Stable manure supplies humus by the decay of organic matter, while nitrogen and potassium as a rule are contained in it in considerable amounts. The percentage of phosphorus is not sufficient. On one of the best farms in Kentucky 50 pounds of rock phosphate (acid phosphate or basic slag will do) is added to each ton of manure as it is being made in the stable. In this manner the phosphorus deficiency is overcome. It is hard to find a better form of fertilizer than this. Such a system of reinforcing the manure with phosphorus is practiced extensively throughout the Middle West and in many sections of the South

What Tests Show in Ohio

After making hundreds of tests throughout the State, the Ohio Experiment Station has instituted on its experimental farm a splendid system of fertilization for a rotation which contains wheat as one of its crops. It is described as follows:

"Corn, oats, wheat, and clover have been grown in a four-year rotation . . . these crops being grown on four 10-acre fields, each crop being grown every season

"In this experiment, manure has been taken directly from the stable to the field . . . This manure, moreover, has been reinforced with phosphorus carried in acid phosphate or raw phosphate rock to make up for the phosphorus taken out of their feed by the animals producing the manure in order to build up their skeletons, the phosphate being dusted in the stable at the rate of one pound per 1,000-pound animal per day. This phosphated manure has been spread on the clover sod in the fall or early winter at the rate of about 10 tons per acre, and plowed under for corn, the plowed land being dressed with limestone (1 ton per acre).

"The oats receive no treatment, but the wheat receives a [CONTINUED ON PAGE 3

See if There Isn't a Fortune Buried Somewhere on Your Farm

By J. Sidney Cates

I HAVE spent my life studying and working as a farmer. In addition, I have watched other farmers, and I have been so impressed with the success of the man who *thinks* and *studies* about his farm and what he is doing, as compared with the farmer who doesn't, that I determined to write my experience, in the hope that it might help you as it has helped me.

I have seen so many farmers make money-producing *discoveries* by studying their own farms instead of wishing they had the money to buy a better one that I am almost tempted to say there is a fortune buried on *every* farm, no matter how poor it is, if the owner only has the insight to search it out and develop it. Maybe you can do this on *your* farm. It *has* been done on other farms, as I shall show you. Here is a case in point:

I happened to visit last summer a certain section of the Piedmont district of North Carolina, where for generations the lands had been poor and the people poorer. They had no money and not much hope. They were asleep.

Ten years ago a certain ambitious youngster down there got married, bought an awfully poor farm, and settled down to see what he could do with his life problem. He had less than a hundred dollars capital. That is why he bought the farm he did. It was the poorest farm in the neighborhood. The owner had moved away and given it up as hopeless. The farm was so poor that a renter could not be secured. That was why this young man was able to buy it entirely on credit.

An interesting thing happened that first year. Young Wood, the new owner, had his eyes open to everything going on. He noted this interesting thing which the former owner and all the renters had overlooked: Down back of the barn on the farm was a volunteer crop of clover. It was plowed down in preparation for corn. Young Wood noted that the corn on this clover land grew off more thriftily than the rest of the field. At the end of the season he harvested three times the corn on the spot where clover had been than he did on other parts of the field. Immediately he decided to act on what he had observed.

By skimping and saving and by working at odd jobs here and there during the winter he was able to save enough money to seed all his wheat in clover the following spring. He has been doing that ever since. This farm is now one of the model places for miles around, and the yield ranks well up with the best Corn-Belt land in America. Clover has made the difference. Two other farms have now come under his ownership. Clover makes them pay for themselves. He has also found that second-crop clover in this section makes a heavy crop of seed.

Everybody in the community is raising clover with the same land-enriching and prosperity-making results. There is no more skimping and saving to get the seed. Clover hullers go round from farm to farm and thresh a surplus; the surplus is marketed at $25 to $30 a bushel. What formerly took saving and denial to be able to buy is produced in quantity, and with ease. All this came through *one man's* keeping his eyes open and recognizing opportunity when he saw it.

Who knows but what there is some such discovery, waiting for you to see it, right there on your home acres. Who knows but what you, if you quit wishing you had a better farm somewhere else, and devote your time to investigating what you and your neighbors *have* got, might stumble across some new way of cropping or of doing things that would make not only you but your whole part of the country many times as productive, many times as rich, as it is now.

Thousands of men had seen apples fall off trees before young Newton saw one. But of all those thousands, Newton was the *only* one who realized what it meant—and thereby discovered the law of gravitation. That was because he *thought* about what he saw. He used his mind on what was going on around him.

Not only is this the only way you and I and our fellow farmers can make a striking success of farming, but it is the only way in which once poor, unproductive regions can be developed. The scientists don't make the big discoveries. They can't. They're too far from the actual working field. So it is up to you and me to do it. We *can* do it. And do.

The country is full of examples of how the shrewd watchfulness of *one man* has not only made him prosperous and successful where he was poor, but has made the whole region around him prosperous and productive too. And when you run it down you find in every instance that that one man was a man who kept his eyes open and his head at work. He saw that what the country around him was producing was not a very successful group of crops, and he watched for—and found—signs to show what other crops could be grown there more profitably in their stead.

And the scientists themselves are pretty well agreed that the farmer is the leader in solving his own most practical problems. It means that you and I have always, and will always, blaze our own way in the big things. The most important work that the agricultural student can do is to keep up with what you and I are finding out from our experience. The job of the county agent and the agricultural departments is to pass along to others the practical results of your experience and mine.

I try to use my head on the problem before me. When you have worked a thing out, some student of farm management will come along and write up what you have done, and pass it on to the world at large. But you have the opportunity of being the leader, of making the first money from what you discover.

To prove that we farmers ourselves *are* making the big practical discoveries about farming, and to drive home the value of using your own head in farming, let's look at some further instances in which it has paid others, and paid them very well, too:

Way up in the tip of the State of Maine there developed years ago a vast potato industry. Aroostook County is in many respects the premier potato-producing section of America. The system followed to make the good-year average of 300 bushels an acre is very simple. The farmers have found that it gets the best results for them, and over against it they have tried practically every other way one could think of. The system they have worked out is about as follows:

The potatoes are grown in a rotation with oats and clover. The usual way is to have two years of potatoes, one year of oats, and one of clover. Sometimes potatoes run only one year, and sometimes for three, before the one year of oats and one of clover follow. The ground for the potatoes is thoroughly prepared for planting, and as heavy application of fertilizer as the potatoes will pay for is applied. This is the big point in the Aroostook system. Of course, the crop is sprayed to keep off blight and bugs. But the rotation and fertilizer are the big idea. In other sections the basis for fertilizer application seems to be, *the least that will do*, rather than the most the crop will pay for.

Now comes the strange part: Even the Aroostook people themselves for a long time thought that their big yields were due to their *wonderful soil.* Everybody else was sure of it. Eventually values in this section climbed to such a height that it was difficult for the young men to get a foothold on the Aroostook land. Consequently they drifted out further south, where lands were cheaper. Down in south Maine they made purchases for $20 to $30 an acre. They brought along the same old Aroostook system, however—a clover sod and heavy fertilizer application. *It worked like magic.* Three hundred miles nearer market, these young farmers in south Maine are making as big crops on this cheap land as they formerly made in the far-famed Aroostook region. It was all in the system, and the farmers themselves worked out the system.

Then look what happened in the so-called Black Belt section of Alabama and Mississippi. It is another excellent illustration of our ability to find a home-made solution of our home problems. For a hundred years a single field in this Black Belt had been cropped to cotton without change or rest. Ten years ago the normal average yield had dropped as low as one fourth of a bale an acre. Then *someone discovered* that these heavy limestone lands were naturally adapted to alfalfa. Now the crop is going out in vast acreages, and on these seemingly hopelessly impoverished lands it is making three to four tons of hay. Furthermore, when the alfalfa has run its course and needs to be plowed up, the sod produces as well as any section of the Corn-Belt States. The farmers themselves found this out by their own experience. Had they kept their eyes [CONTINUED ON PAGE 21]



Young Wood, the new owner, had his eyes open to everything going on

Many a Man Who Can See Perfectly Well is Stone Blind

DID you ever look all around the table for the salt cellar and suddenly discover it right in front of you? Of course you have. So have I. And there's something worth thinking about in that.

Johnson talks about the same thing on a bigger scale in this article. But it's the same idea. We humans frequently fail to see what is sitting right in front of us waiting to be looked at. It may be opportunity, or it may be a salt cellar—with this difference: if it's opportunity, we don't see it because we don't set our minds to *thinking* along channels that will lead us to it. We are *not* looking for it hard enough. Some man once said: "There is none so blind as him who will not see." He had the dope, brethren. THE EDITOR.

THE Boy lives on our Farm. he's not
Afeared o' horses none!
An' he can make 'em lope, or trot,
Er rack, or pace, or run.
Sometimes he drives two horses, when
He comes to town an' brings
A wagonful o' taters, nen,
An' roastin' ears an' things.

Two horses is "a team," he says,
An' when you drive or hitch
The right-un's a "near horse," I guess,
Er "off"—I don't know which.
The Boy lives on our Farm, he told
Me, too, 'at he can see,
By lookin' at their teeth, how old
A horse is, to a T!

—*James Whitcomb Riley.*

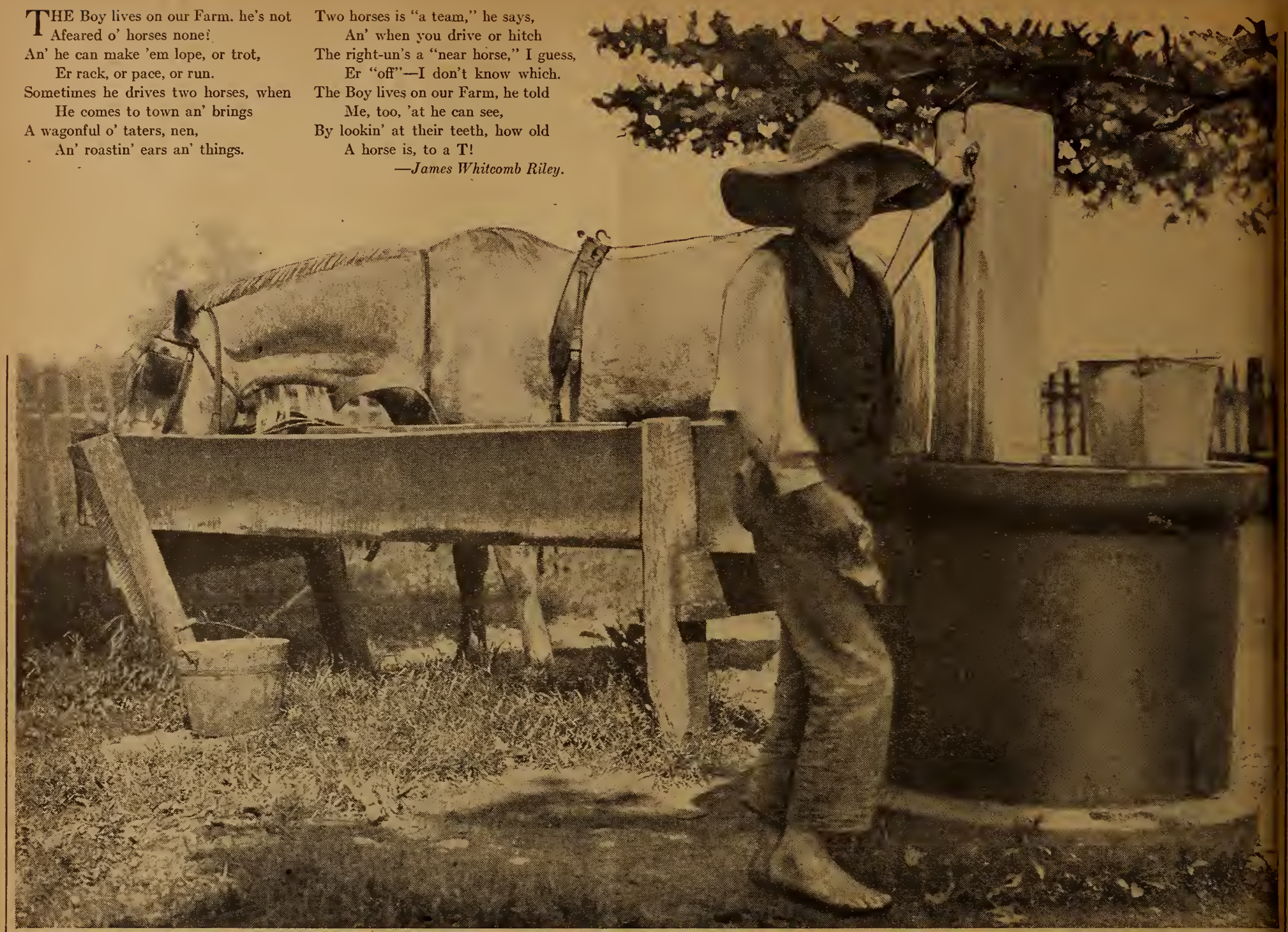


PHOTO BY WALTER C. HARRIS

Get a Rubber Stamp Marked "Finis" and Wear It Out?

By Bruce Barton

THE general manager of a big manufacturing plant was talking about some of the problems of his business—particularly the problem of men.

"Our office manager resigned some time ago," he said, "and last week he came in to say good-by.

"He was obviously pleased with himself. Things were in such good shape, according to his way of thinking, that his successor would find little to do.

"I wished him luck; I had arranged already to put in his place a live young fellow from the West who had made a record in office management.

"A couple of days later the young fellow came in to report on his survey of the office. He threw up his hands.

"'It's terrible!'" he said. 'I never was up against a more discouraging proposition in my life. Give me a few weeks, however, and you'll begin to notice the difference.'

"There you have it," the general manager continued. "The condition that was so absolutely satisfactory in the eyes of one man was utterly inexcusable according to the standards of the other.

"There was nothing definitely wrong in the character of the first man: he was neither dishonest or lazy. *But he just never finished anything.* The office was nothing but a bundle of good resolutions unfilled.

"The other man, thank Heaven, belongs to that little company of folks who have the habit of seeing the thing through, of making a finished job of what they undertake. They are rare birds; what wouldn't I give for a few more of them!"

Every employer of men has frequent occasion to echo that sentiment. We talk and write about success as though there were some mystery in it. But it is a very simple proposition. All the world asks is that a man should take hold of one task—any old task—and complete it, and then pass on to another.

It is very illuminating to read the lives of great men on this point.

Charles Darwin made his reputation with a single book. And how long do you think he was engaged upon it?

> On my return it occurred to me, in 1837, that something might perhaps be made out on this question by patiently accumulating and reflecting on all sorts of facts which could possibly have any bearing on it [he says]. After five years' work I allowed myself to speculate on the subject, and drew up some short notes; these I enlarged in 1844 into a sketch of the conclusions which then seemed to me probable; from that period to the present day I have steadily pursued the same object. I hope I may be excused for these personal details, as I give them to show that I have not been hasty in coming to my conclusion. My work is now (1859) nearly finished; but as it will take me many more years to complete it, and as my health is far from strong, I have been induced to publish this abstract.

Twenty-two years of sticking to the thing, working always toward the day when it could be called "finished"—it is such a work that the world rewards with its highest honors.

"At the Day of Doom," says Christian in Pilgrim's Progress, "men shall be judged by their fruits. It will not be said then, 'Did you believe?' but, 'Were you *doers* or *talkers* only?'"

It's a very good thing to look forward occasionally to the end of the chapter—to the day when your work will be done and you must accept the record as you have written it.

Talk, good resolutions, things begun and left in the middle—all these are pretty unsatisfactory items to show up in the final report.

It's the things you have started and finished—great or small—that look good when you get to the end.

Let's join the company of finishers: let's be able to say at the end: "Such and such things I *did*, and *finished*. They are my monument—the evidence that it was worth while for me to have lived."

Points to Consider When You Are Ready to Buy a Motor Truck

By D. S. Burch

THERE are a great many important points for you to consider before you buy a motor truck. You cannot learn all of them from the truck manufacturers, although they can give you a good deal of help if you put your problem before them. And you cannot learn all the important points by studying what other farmers have done with trucks.

A truck for *you* is an individual problem for *you*, and I shall try to show you in this article what points to study and how to study them. I represent no one but you in this matter, am responsible only to you and myself for what I say; so there is no ax to grind except yours. I have studied the truck situation carefully, at first hand, and I believe I have here the facts you want to get.

There are two ways to figure a problem like that of motor hauling, which is becoming one of increasing importance to you as a farmer.

One way—the deceiving way—is to compare it with a similar problem like that of horse hauling, and figure relative costs per ton-mile, or per day, or per dollar invested. Problems like that are fine for a technical accountant. He can feed on them for a long time. But the correct way to decide when a motor truck is a worth-while investment includes much more than the average accountant will tell you. It includes the human side—your problem—in addition to the mechanical and business sides; in fact, your part of the problem is the most important of all.

Briefly, the correct way for you to figure the value of a motor truck is what it will do for what it costs and not how it compares with horseflesh, which we have been using in the past, and which we are discarding to a considerable degree.

It is a time and money-saving proposition for you as a farmer to have a motor truck the moment circumstances and conditions warrant it. Why? Because, under proper conditions, it enables you to do your work more quickly and more easily than you have done it, and to do *more* work and *better* work. And anything that accomplishes these ends gives you more time and more money to make life comfortable and agreeable to yourself and your family, and equips you with money to buy the improvements that add to the enjoyment, such as better houses, better clothes, more good books, better household appliances, vacations, and the like.

In short, the more work you can make machinery do for you on your farm, the better and more successful and happier you will be as a farmer, the more you will produce, and the more you will realize from your production.

Even leaving all other machinery out of consideration, the 6,000,000 motor cars in this country represent fully 150,000,000 horsepower in the form of energy that shortens the hours of routine labor and lengthens the hours for leisure and personal betterment. More than that, it is power under your personal control, and is more readily managed than either human or animal power of equal amount.

Thus, while the auto and auto truck is scarcely a generation old, the human desire it represents is centuries old, and it is well to keep that thought in mind when considering motor trucks. The strong trend toward them is clearly illustrated by an experience a few weeks ago when I had occasion to make a motor trip over unimproved clay roads. Even when dry they were locally regarded as horse-killers, owing to the hills, and a notice issued by the American Automobile Association warned that a trip over them "should not be attempted after or during a rain." However, with chains on the wheels I set out after a rain, and 10 miles out I met a thunderstorm, followed by a soaking rain.

To attempt ordinary speed was to bring certain disaster to springs and axles, but I completed the trip of 45 miles in six hours and on the way I met three men on horseback, two two-wheel road carts, one automobile, and three motor trucks. The trucks carried about two-thirds loads. Trucks triumphant over mud!

The incident showed that the motor age is close on the heels of the mud age, which is now receding rapidly, though not as fast perhaps as many would like to see. Probably none of those trucks were obtaining more than six miles per gallon of gas, probably less; whereas on hard, well-graded roads a gallon would have carried them 10 miles or more.

Because of unimproved highways in some parts of the country the benefits of motor-truck ownership, even when all added together, are not enough to justify the expense. Then the wisest thing to do is to wait until more advantages can be seen or the cost is reduced. In time both of these developments may occur. On the other hand, if your farm is now ripe for the change it can be made more profitable by using trucks instead of horses for hauling. As a guide to wise selection, following is a list of the more important points you might do well to consider with emphasis on matters not commonly discussed in motor-truck specifications or in general literature on the subject. In other words, I have endeavored to help you reach that elusive goal in motordom—perfect satisfaction with your first selection. All the points are based on first-hand observations or experience, and on what dependable persons have told me of their motor-truck satisfaction, or why they would choose differently in making another selection.



Guide Points in Motor-Truck Selection

CAPACITY: The factors affecting the choice of a truck are so many and varied that no one can honestly or intelligently advise any one size as best suited for farm use. Many styles and sizes, from a half-ton speed wagon to about a three-ton outfit for large farms situated on good roads, have their coterie of friends and enthusiasts. Incidentally the capacity of any truck with ample power can be increased by the use of a trailer.

MOTOR: Power, simplicity, and accessibility are all necessary for a practical motor truck. There are several motors nationally known as dependable and otherwise favorably recognized. These are the motors found in the majority of trucks now in general use. Such a power plant is a virtual guarantee against serious trouble or costly upkeep. In choosing between several of about equal merit, select the one represented locally by the best service station, judged from the standpoint of repair parts in stock, reliability, and business stability.

TRANSMISSION: For trucks not exceeding three-ton capacity, either an internal-gear drive or worm drive is generally preferred, though a chain drive has several advantages, such as accessibility and economy of replacement. Sturdiness of construction in any kind of drive is a prime essential in traveling average country roads.

BODY: A strongly built body, made especially for the owner's requirements, or a convertible body, suitable for various uses, will add to the service a truck will give. The height of the body bed above the ground is an important measurement to obtain before purchasing either a chassis or a complete truck.

High bodies make loading and unloading difficult—especially live stock—unless there is a good loading platform, which, by the way, is an excellent thing for a farm to have. Extra long or extra wide bodies are to be avoided; they add to difficulty of driving in city traffic, and may conflict with parking regulations.

TIRES: Pneumatic tires are preferred if a truck is to be driven at speeds exceeding about 16 miles an hour, also for hauling products requiring tender handling. Even when solid tires are used on the rear wheels, pneumatics are sometimes used in front to protect the motor against road shocks.

When of good quality and kept tightly inflated, pneumatic tires will give excellent service in truck work. Solid tires, however, require less attention and make the truck's movements more nearly independent of tire troubles. In connection with the capacity of trucks it should be remembered that rubber tires, either solid or pneumatic, must not be expected to give their rated mileage if overloaded.

WEIGHT AND OVERLOADING: The rated capacity of a motor truck is, unless otherwise designated, the weight it will carry *safely*. If extra body weight or special equipment, such as a driver's cab, is added, that additional weight must be considered when loading the truck. The more body and extras you add to a truck the less load you can carry. It is true that, if driven carefully, most trucks will haul large overloads—25 per cent or more—without apparent harm. But any overloading is bad practice, and is always at the owner's risk. It weakens the metal parts subjected to the added strain, especially the transmission and axles, and, through a condition known as crystallization, makes them less dependable afterward.

Another thing: Before loading a motor truck of the larger sizes with a product to be weighed before unloading, it is well to know the capacity of the platform scales that will be used. Many platform scales in country districts were installed before the day of motor trucks, and have insufficient capacity to weigh very large trucks heavily loaded.

LICENSES: The matter of registration, though usually a simple and inexpensive procedure, is worth consideration before deciding on a truck. Should any reader decide to invest in an especially large truck for community hauling or other purposes, he may be surprised at the license fee.

Some States demand exceptionally large fees for heavy trucks, partly to cover the damage they do to the roads. In Washington State, for instance, the fee is $15 for a two-ton truck, $50 for the five-ton size, and $250 for a seven-ton truck. Maryland demands a license fee of $300 for a six-ton truck, and $500 for one of seven tons capacity. In the face of such figures it will often be better to purchase two smaller trucks, or a truck and trailer, instead of a single large truck.

SPECIAL EQUIPMENT: The extra equipment which may be purchased with a new truck or added to it later is almost without limit. Bumpers, batteries, and electrical equipment, special comforts for the driver, extra tools and accessories—all these things in the aggregate represent a considerable investment, and because of that should be considered in comparing motor-truck specifications and costs.

Many accessories, though convenient, are not essential, and when a limited sum is to be invested it is well to consider sound construction and sensible design first. [CONTINUED ON PAGE 34]

Are You on Your Way Back to the Garden of Eden?

WHEN Adam and Eve ate the apple and lost the Garden of Eden, poor old Adam had nothing but his hands to earn a living with. He couldn't do any more of a day's work than a ditch digger. Pretty tough.

Later on came men who used their heads to figure out tools to do their work quicker and better. To-day every tool and machine on your farm, as well as every tool and machine in the world, represents the work of men's minds rather than their hands. Your tractor, your reaper, your separator—all were originally an *idea* in some man's mind.

Gradually the ingenious machinery devised by men's minds is eliminating the drudgery of man's physical toil. This day is dawning on the American farm. And every good machine you install on your place to save time and labor takes you one step nearer the Garden of Eden, a place where you will work for the joy of working, and not because you *must*.

THE EDITOR.



A motor-truck, wisely selected and used, is just another labor-saving machine to make your farming of to-morrow less laborious and strenuous.

One Thing You Must Have in Your Soil to Make It Grow Big Crops

By Joseph E. Wing

HERE is God's world as He made it and as man has battered or marred it. We rule and use the world and give it what care it gets. Then how are we to use it? How are we to walk on it? What attitude are we to have toward it, and toward each other? What duty are we to owe to this world? What thought shall we give to him who shall come after us? What shall we do to keep our soil fertile and our homes prosperous? These are some of the thoughts that, it seems to me, are worth concerning ourselves with today.

Theodore Roosevelt in taking account of the state of mankind in these United States of America in 1908 felt that there was something wrong with country life and country living. It seemed to him that farmers were not living as well as they should: that they did not dress well enough, eat well enough, make money enough, have high enough ideals, give right attention to education and morals; and, in short, that they fell down below the high standard that we set for American citizenship. This was a serious indictment against the American farmer.

I will not take time here to discuss whether the indictment was justified by the facts or no. Certain it is that few of us, whether we live in town or country, live up to our opportunities. We do not always think rightly. We do not always have right ideals, right aims. We are all, perhaps, as lazy as our condition in life will permit us to be. And, God help us, we cannot always do so well as we feel we ought to do.

I think it is true, however, that the man in town has, as a class, had a better opportunity than the farmer. The life of the farmer has been hard. High prices for work in towns have drawn away his laborers or forced him to pay higher wages oftentimes than he could afford. What the farmer has had to sell has been offered in the market of the world; what he has bought has largely been made of higher price.

That, more than most other causes, has perhaps made the farm unprofitable in the past. The mighty development of the West suddenly threw on the world's markets such a flood of food as never was before. That also depressed prices. From 1870 till 1900 was the era of too rapid development of new and fertile lands. The farmer of the Atlantic coast lands could not compete with his brother in Kansas or Dakota in growing wheat and corn. Because his labor was poorly rewarded his boys left him to go to towns or to newer, richer lands.

During these thirty years the farmer merely held on. He could not do more. The traditions of the past upheld him; fatalism and hope that is born every spring with the coming of the birds made him continue to sow and reap; stern economy kept him sometimes free from debt. It was impossible for him to get adequate pay for his toil. He learned some bad habits, maybe. He failed to give his sons as good an education as he had himself, very often. He let his farm go down in fertility. He formed a habit of feeling himself a second-rate man, engaged in a second-rate calling. He formed a habit of bad farming.

Then, about the year 1900, the tide turned. Then prices for farm products began to improve and farmers to take new courage, feel new hope. Then farm lands began to increase in price. Then farmers began to walk more erectly, hold their heads a little more proudly, have money in the bank instead of keeping only their indebtedness there. Steadily since that time their material condition has improved.

Theodore Roosevelt's commission was appointed thirty years too late, maybe. And yet there is much that can be done for the farmer to-day. He finds himself in the condition of a man long held in slavery, suddenly made free and asked to step out and take his place in the world. The man who was a slave will not at once be able to be a man again, to measure up to his opportunities. Nor can the farmer suddenly measure up to his opportunities, now that they have come to him.

What has turned the tide? Has it been the increase in gold discovered in the world? Doubtless that has helped much.



Joe Wing showing some of the blue-grass farmers how to make the soil "bubble"

Has it been the increase of mouths to feed—the great growth in population, not only here but elsewhere in the world? Doubtless that has been a mighty factor. And there are no new corn lands to be plowed—we may also thank God for that. All the cornfields of the world have been plowed, with the possible exception of some in Argentina.

All the wheat fields of the United States have been plowed, and, what is more to the point, already the fields that were supposed to have inexhaustible fertility are showing unmistakable signs of soil exhaustion. Apparently we shall never again have such a curious thing as an overproduction of food in the world. Certainly if our industrial workers are kept busy so that they may eat we shall find demand for all that we can produce, and more.

There are, as I look at it to-day, several very real perils before us, and very different perils from any that we have ever had to face before.

There is the peril of reckless soil exploitation and soil exhaustion. We are using up our fertility faster than it was ever done before in the world. We are, with little thought or care, mining out our fertility and sending it abroad or to the cities to be drained into the sea. This is the material peril that confronts us to-day. The others concern our inner life and its outward manifestation. There are perils there in plenty. There is peril in the farmer becoming suddenly well-to-do, in his not knowing the best uses of money. There is danger, and it is real and imminent, of decay in some old, primal, and very real virtues that pertain to country life.

I know men suddenly made rich by increase in land values or by good farming who have left their farms, moved into towns, renting their land to tenants brought in from some section where manners, and maybe morals, were not rightly developed, the farmer in town becoming little more than a loafer, his sons growing up around the pool tables and forming habits of idleness, arrogance, and snobbishness. That is a very real peril in some States of the Union.

When the farmer leaves his farm and "moves to town" it is usual that the farm, left in the care of men who have no other interest than a passing one, and whose only aim is, naturally, to see what they can get out of it quickly, rapidly runs down in fertility. That is one of the very real perils of the day and hour. What we need to teach the American farmer first of all is his duty toward his land—how he can best keep it, how he can best enrich it and make it good, and how then he can live on it worthily, as a man ought to live in God's world.

All this is merely introductory to what I wish to say. Here follow three propositions:

First, to better country life and make high ideals and civilization possible we must study our soils and make them fertile.

Second, we must teach our children to have a reverent attitude toward God's world and all that it contains, including plants, animals, children, men and women. Teach, did I say? Forgive me, the child has already that reverence born within him. We must teach *ourselves* to refrain from leading the child away from that spirit. We must cherish it and develop it in the child and in our own souls.

Third, we must encourage and develop in the child an inquiring mind, and couple with that a trained hand.

If these three things—or possibly you will call them four things—are done, all other truly good things will follow as naturally as grass comes after the rains of spring. We shall not need any other commissions to learn what is the matter with the farmer; instead, country life will be accepted everywhere as being as near to heaven as is possible to find on this earth.

Now let us take up these few and simple propositions one by one and examine them. First comes soil fertility. There is absolutely no doubt that intelligence, ideals, and morality go along with fertility of soil. When one lives in a region of impoverished soil, his lot is too hard, he must toil too long for too small a recompense to have much strength left for other things. He cannot, if his soil is impoverished, bring from it good roads, good houses with bathrooms, gas or electric lighting, books, magazines, pictures, schools.

The things that awaken and keep ideals alive he cannot have if his soil is impoverished. In fact, such is the upward tendency of the Americans that it is almost true that if they can be taught to make their soils rich, to make money on them, the other things will follow of their own accord.

That is *almost* true, I say. It is not quite true enough; there is need of foundation training for the child of the prosperous farmer, but let's begin by helping him to become prosperous in a material way. And to teach him to make soils good, I would begin by making him see that the very foundation of soil fertility and soil conservation is carbonate of lime. When a million tons a year of carbonate of lime are used along the Atlantic seaboard, then will come the real beginning of a new and splendid fertility. Carbonate of lime in the soil takes out its acid humors, its toxic poisons. Carbonate of lime brings in useful bacteria. Carbonate of lime brings clovers and alfalfa. Carbonate of lime brings nitrogen down from the blue sky. Sowing it abroad over the fields is as though one sowed nitrate of soda, only that it is better than nitrate of soda, because it is more permanent in its effect.

Potatoes are the only crop I know of that does well in a slighily acid soil. Cereal grains will do fairly well without a limed soil, but they would do much better in a soil thoroughly limed and cropped to a legume rotation, [CONTINUED ON PAGE 27]

And See What Happened When They Did Use Limestone



THE farmers at High Hall, Missouri, are growing legumes nowadays, and whenever you ask them about the stuff they tell you about Bill Lewelling, county agent of Adair County. It was Bill who turned the trick. He did it with limestone—and drainage. And clover, alfalfa, rape, and other nitrogenous crops grow around Montgomery County, now, where a few years ago marsh grass and rank weeds were the only things that would grow.

"Because of my teaching at college and the results of the five-year experiment on my father's farm," said Bill, "it was only natural that I should talk lime to my neighbors. At threshing time they noticed the yields and also the clover, and eventually a few became interested in using limestone.

"While attending a farmers' meeting at the neighborhood town of New Florence I induced several farmers to club together and order a car of limestone. This cost $2 a ton, and some fought shy. However, we got enough orders for a car, and it was spread on the land. Fine clover resulted.

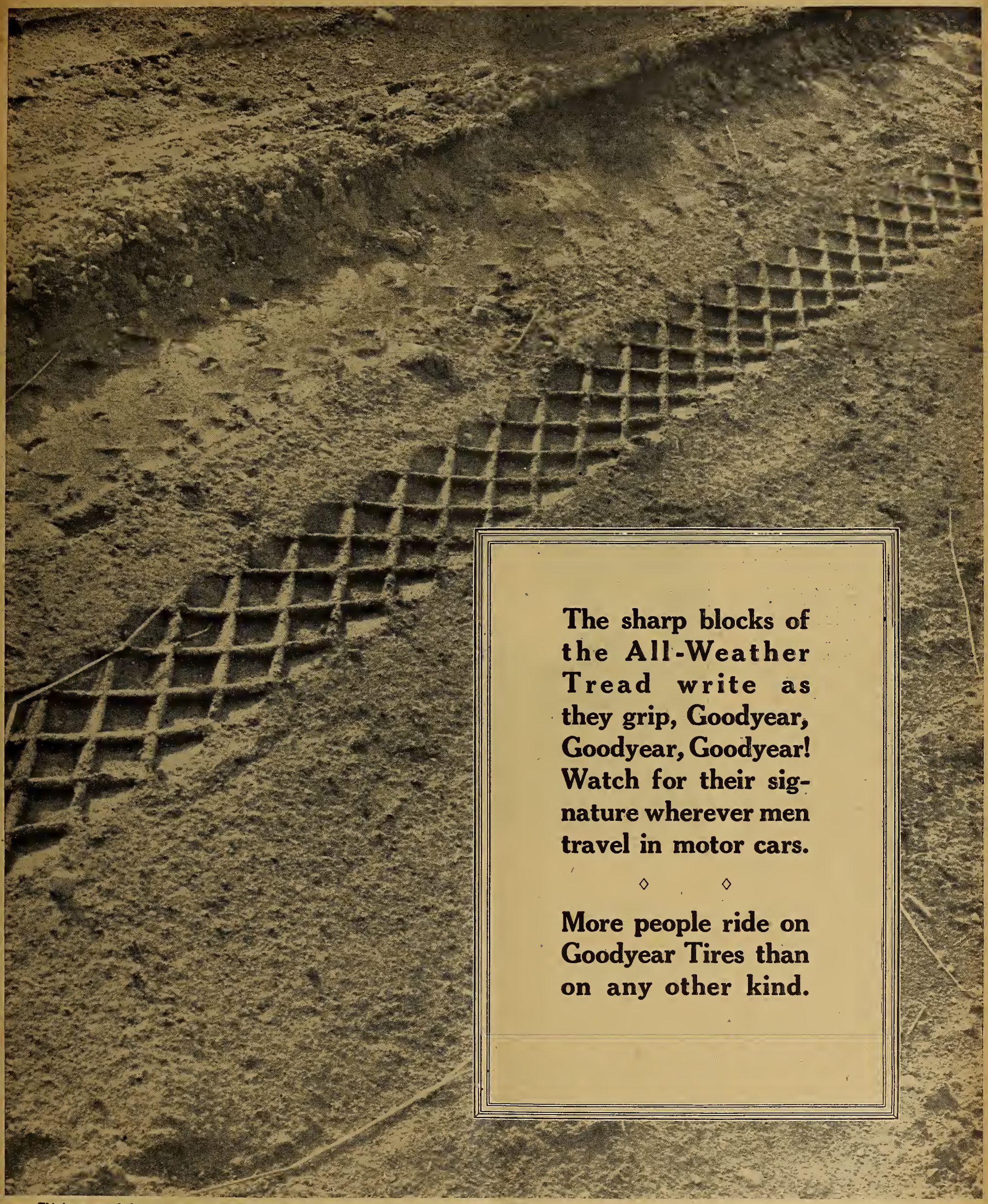
"This $2 a ton kept a good many backward, and for two years I kept talking. I called meeting after meeting, but only one or two attended. I wrote articles for the local papers. I was all lime. It surely was a grand experience, as I had many laughs as well as tragedies. One fellow wanted to know if the lime wouldn't burn his land. He said he saw it smoking when they wet it to make plaster.

"As there was an abundance of good limestone in the hills south of town, it seemed to me a portable crusher would be profitable, and would save lots of money. At last, Clarence Bishop, a brother to Roy ("Sweet Clover") Bishop, a county agent in Illinois, became interested, and by working together we got a number of farmers interested in the crusher.

"We called another meeting, and thirty farmers attended. At this meeting we started the campaign to get the crusher through a co-operative subscription. We asked fifty farmers to contribute $20 each. This was done, and we bought a machine for $700.

"The first year we crushed 200 tons, and the second year a like amount. We bought the rock at 75 cents a ton, and the crushing cost 70 cents, making the cost $1.45 a ton, or 55 cents cheaper than we could buy it. "It did the work, and farmers from adjoining towns, some 16 miles away, came for ground limestone. We moved it to other near-by towns, so they, too, could benefit, and it led to many farmers draining, and buying fertilizers wherever needed."

T. J. D.



The sharp blocks of the All-Weather Tread write as they grip, Goodyear, Goodyear, Goodyear! Watch for their signature wherever men travel in motor cars.

◇ ◇

More people ride on Goodyear Tires than on any other kind.

This is an actual photograph of the impression left on a dirt road by the Goodyear All-Weather Tread

GOODYEAR

AKRON

Little Things to Think About That Will Help You with Your Farming

Watch for the Corn Borer

CORN and truck crops of the country are threatened with one of the worst insect pests yet introduced unless effective measures can be found to hold in check the European corn borer, which made wide ravages in the States of New York and Massachusetts last summer. The adult form of the insect is a moth which flies from place to place and deposits eggs on plants of sweet and field corn. The eggs hatch into borers, which eat their way into all parts of the plants, thus causing much damage.

This borer is not confined alone to corn, however, but attacks celery, beans, beets, tomatoes, oats, potatoes, and many of the wild grasses. The fact that it is thus able to survive in an almost unlimited number of hosts makes it a very difficult pest to exterminate. If it confined its attacks to one plant alone the problem would be a much simpler one.

"Because the moth flies, the insects spread quickly and easily," writes J. S. Houser of the Department of Entomology at the Ohio Experiment Station, "but greater danger lies in the shipment of materials containing the larvæ of the insect from infested to non-infested territory, particularly celery, Swiss chard, beets, string beans, oats, gladiolus and geranium plants.

"It is thought that the borer was introduced into the United States through a shipment of raw hemp, consigned from Europe to cordage factories in Massachusetts, where it was discovered in 1917. An outbreak found in January, 1919, near Schenectady, New York, is believed to have been imported from Austria in bales of broom corn.

"At present there is no simple and effective control measure known. Poison materials applied to plants kill some of the borers, but a sufficient number escape treatment to nullify the final results. Burning infested crop remains is effective, but must be absolutely thorough. If corn alone were affected the control of the insect would be easier. It is believed that federal control measures will have to be adopted if an outbreak appears in Ohio this season."

Already the pest has been found infesting an area of almost 320 square miles in Massachusetts and 400 square miles in New York. Suspected presence of the insect should be at once reported to the entomology department of your state experiment station. It will be well to keep a close watch this summer for indications of this dangerous new enemy of our crops. Only prompt action can prevent its spread over the entire country. W. A. S.

How It Paid Us to Buy an Ensilage Cutter

By Earl Rogers (Ohio)

ONE of the problems that is met every fall among silo owners is the timely filling of the silo. In some cases it is a serious one, and a considerable amount of money is lost by the owners of the silo because a cutter cannot be found to do the work when it is most needed.

When four of us, whose farms are adjoining, bought silos at the same time we had this silo-filling problem to solve. One day an agent came along, and after an hour or so we bought a small-sized cutter.

The cost of the machine was $285, which, divided among four, was not much of a burden for anyone. On the whole it is a cheap cutter. It has a 13-inch throat. On an average, with good power, it will run from 6 to 8 tons of silage an hour. One can usually figure that a cutter or any other machinery will do from 10 to 50 per cent less work than the salesmen claim, and this was no exception. This size is not what would be called a custom machine. It is for local filling only, and is big enough for that work. With this size we are told that there is less settling afterward, because there is more time to tramp it down well, and also more time for it to settle while the filling is going on. According to some writers this is an error, and we should not tramp it at all. I am not sure about this point.

The great advantage of this privately owned cutter is that we can get our silos filled when the corn is ready. Corn must go into the silo at the proper time to make the best food.

Our lack of power is a slight drawback. It costs us something like $2 an hour to hire our power, so one can easily figure from this the cost per silo or the cost per ton for filling. Last year it was hard to get this power just when we needed it, but 1918 was an exceptional year. This year it will be easier, I am sure, because more labor is available and there are more tractors on neighboring farms than there were. It is possible that this year we will buy our own power, and if we do we will be ready for any frost that hurriedly matures the corn, or any field that gets ripe before we expect it.

Another great advantage of owning a cutter is that a silo is easily refilled after settling, because it does not leave the neighborhood after the silos are filled. And to the man who wishes to utilize the full capacity of his silo this is of considerable importance. A silo that settles down six feet has that much wasted space, and that part of the investment must be added to the overhead expense of the part of the silo which is filled.



Keeping the roadsides mowed will improve the appearance of your farm as well as prevent the spread of noxious weeds

One Way to Prevent Cholera

BEFORE the fall litters come on and fall feeding begins is an excellent time to start preventive measures against hog cholera. Here again the old adage that "an ounce of prevention is worth a pound of cure" is doubly true. Sanitary measures before the hog is put in the house will largely prevent epidemics of disease, according to Prof. Robert Graham of the Illinois Agricultural College at the University of Illinois.

Other diseases than cholera are often caused by unclean conditions in the hog house and pen. Some of these are sore mouth, bull nose, necrosis of the ears and tails, and the swine plague, or contagious pneumonia, which often develop in suckling or weanling pigs.

A few hours spent cleaning out old litter and manure may save you a good many pigs later on. A reliable disinfectant should be applied to the walls of the houses, troughs, fences, and any other place where germs might be lurking. Creolin is efficient for this purpose, and lime is good. Do not be afraid to apply plenty of the disinfectant, and see that all the corners, especially, are well treated.

The same sterilizing process is used by many successful feeders in the feeding racks which they use for their sheep and cattle. Many times there are disease germs lurking around that cause serious losses which might have been prevented if proper sanitary measures had been taken. S. S. S.

How to Estimate Paint Requirements

IN ESTIMATING the amount of paint required for the home the property owner is sometimes at a loss as to just the number of gallons required.

While the quantity of paint required varies somewhat with the nature of the surface to be covered, and the conditions under which it is applied, yet the following method of measurement will serve as an accurate guide:

A good grade of prepared paint will cover at least 350 square feet to the gallon, two coats.

First, measure the distance around the house and multiply by the average height; then divide by 350, and the result will be approximately the number of gallons to buy.

Of the above quantity one fifth will represent the paint required for trimmings, cornices, etc.

For blinds or shutters of average size you will require one gallon of paint to each 12 pairs of blinds, using two coats. D. P.

$50 for the Best Blueberry?

DO YOU grow blueberries? Have you noticed that some plants yield better than others? If you haven't noticed, be on the lookout for thrifty, heavy-yielding specimens, and you may be able to sell them for as high as $50 a plant. The blueberry—or huckleberry, as it is called in the South—grows wild in many localities. It requires a sour, acid soil, and is actually killed by the application of fertilizer. A plant in New Jersey was found some years ago that had berries three fourths of an inch in diameter, but it was killed by being fertilized.

Mr. F. V. Coville of the Department of Agriculture and Miss Elizabeth C. White of New Lisbon, New Jersey, have been trying for several years to produce new and finer varieties of blueberries. To get new varieties, wild bushes of promise are crossed one with another, and the plants resulting from this cross bring all sorts of new varieties, most of them worthless but some with real merit. It is believed, however, that there are many varieties already in existence both of large size and superior flavor, and it is those that they wish to discover.

If you find any promising varieties among your blueberries, send them to Miss Elizabeth C. White, New Lisbon, New Jersey. But first, if you are interested, write at once and she will send you full instructions. This is not a contest, but the bushes will be bought from you at prices ranging from $35 to $50. They will then be propagated and the new varieties distributed to interested farmers who are capable of proper blueberry culture. J. A. B.

Hogs Like This Feed

By J. L. Justice (Indiana)

THE farmer who can grow most of his feed for his live stock is a fortunate man. Protein feeds are essential, and their price is high. Since the soybean has come into such general favor it has been found a good source of protein. Some have been using the grain for feed, but if it is grown and harvested according to the following plan the yield from an acre may be materially increased.

The beans are grown the same as for hay. If weeds are bothersome, sow the soys in drills 30 inches apart and cultivate them; usually from 30 to 50 pounds to the acre will be sufficient seed. Where weeds do not bother much they can be drilled solid with a wheat drill, using about 50 pounds to the acre. If a crust forms on the solid-drilled soys before they come through the ground it can be broken with a weeder or drag. One cultivation in this manner is helpful after the beans are two inches high, using the weeder only during the heat of the day.

The vines should be cut when the beans are in the stiff dough. They are a little more difficult to cure at this stage than later, but it is possible to save all the leaves, which are a valuable source of protein. Cut them with a mowing machine, but not so low as to get all the tough stem.

The vines wilt quickly, and after a few hours of sunshine will be ready to shock. They are thrown into small-sized shocks, and left to stand for about a week, or longer if they get rained on. The shocks will turn off a good deal of rain without injuring the vines. Do not put them in large shocks or they will be likely to heat and mold.

After about a week they may be stored in the barn. By examining the shocks one can easily tell when they are cured.

The resulting crop is very much like soybean hay, except that it is harvested at a later stage, and contains a quantity of the soybean grain, which is richer than the vine in protein.

This can be fed whole to hogs, but is much better ground into a coarse meal, so that it may be fed in slop or mixed with other hog feed. It is not meant entirely to take the place of tankage, linseed meal, or mill feeds; but it will considerably lessen the purchase of such feeds. It makes a fine supplement to corn and milk for brood sows and growing pigs.

How I Buy and Handle Beef—

[CONTINUED FROM PAGE 8]

at this time, I seldom have any hogs on the farm—that is, aside from brood sows which are about to farrow—so none of the feed is lost in the droppings.

When I lay in a batch of steers I observe their condition and how they are gaining, and then set a time for marketing. If they are not in the right shape at the end of that time, I sell them anyhow, for I figure they are not the kind which are doing their best, nor accomplishing what other steers have done for me.

I accompany every load of cattle I make to the market. It means two or three days away from home, but I think it is well spent. I learn a lot at the yards. I don't stick around my cattle all of the time, but roam about looking at the cattle fed by other men, and compare them with mine. I also learn the kind of stock buyers are taking, and what they are paying. I talk with feeders and get their viewpoints.

All these things go hand in hand with solving marketing and production problems, and they save me lots of money. They are among the many things I learn from the experience of others at the expense of a little time only. If I had to learn these things from my own experience it would be quite costly.

And often I am called upon by the salesmen to tell a prospective buyer how I handled the stock. This makes the trip very profitable, especially if he buys the cattle, for he knows me then; and if the cattle dress out well he will always be an active competitor for my cattle.

To sum up, I find that the packer wants cattle which are well developed over the loins, ribs, rounds, and other places where the highest priced meat comes from; and I have told you how I make fat steers in four months which it takes the majority of feeders six months to feed.

I Can Top the Market With

[CONTINUED FROM PAGE 9]

spoke of cattle from two years up is that very young beef seldom has the marbling of the older animals, and contains too much water. It is generally considered that the stuff under fifteen to eighteen months, unless it has the best care and feed, is not sufficiently matured for prime cuts; and carcasses past three years of age are too coarse in meat and bone, and are uneven in finish and quality. The bones of the older animals are flinty, and the layers of lean meat are stringy and tough, and the fat is yellow.

"The form of a carcass, too, has something to do with the selling value. The best carcasses have width in proportion to the length, with a proper degree of fat covering. The carcass which yields the most loin, rib, and other high-priced cuts is the kind we want most. These carcasses bring the most money on the hook, and naturally on the hoof."

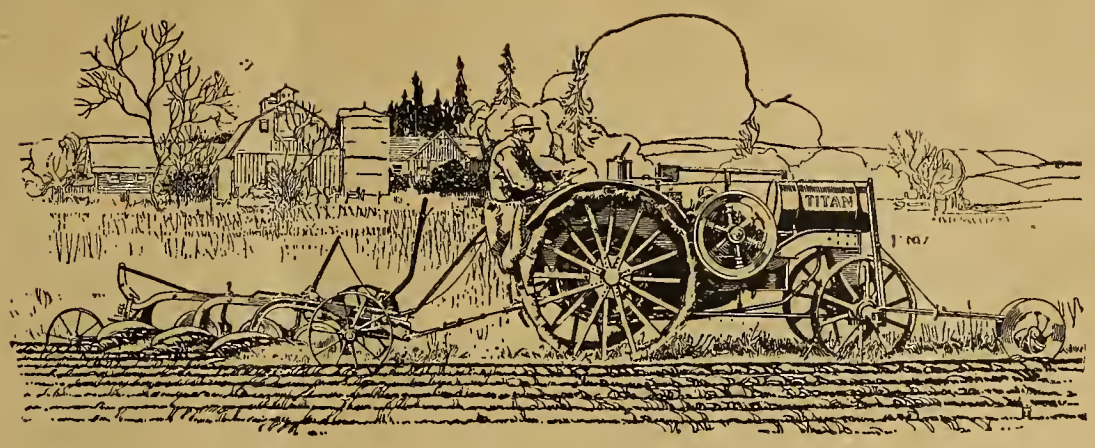
Heavy cattle are needed to supply a certain demand. The Eastern trade, in normal times, requires this kind of beef. In New England the trade for dressed beef is for carcasses weighing 800 pounds and over. The people of the East don't take so kindly to yearlings, but Chicago will take cattle averaging 400 to 500 pounds. Philadelphia takes a few lighter cattle, and New York likes beef weighing from 500 pounds up.

Recently I took a trip through the cooling plants of the packers, and I learned a lot of things about beef within a short time. I saw cattle of different weight, quality, and conformation. I saw beef which was nicely marbled, with a thin layer of fat on the outside; and I saw cattle which had a covering of fat which measured four inches, and the inside had very little.

This fat was gobby too, and a lot of it had to be cut away before the butcher would buy it. This fat went into the suet pile, and it doesn't bring near as much as it would had it been in between the layers of meat.

And there, according to the best information and experience I have been able to get, is the kind of stuff you can grow that will make you money. Mommsen's article will tell you *how* to grow it.

If there are any other questions you want to ask me about this subject, address me in care of the Editor of FARM AND FIRESIDE, 381 Fourth Avenue, New York, enclosing a stamp for reply.



At Last—Our Own Plows

AT EVERY demonstration in tractor history International tractors have stood well at the front in popularity, in steadiness, and in economy of operation. Better yet, in the last fourteen years they have demonstrated their dependability, their low cost of operation and upkeep on many thousands of American farms.

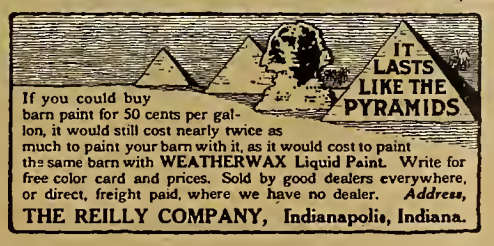
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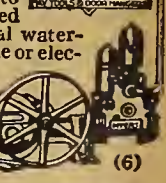


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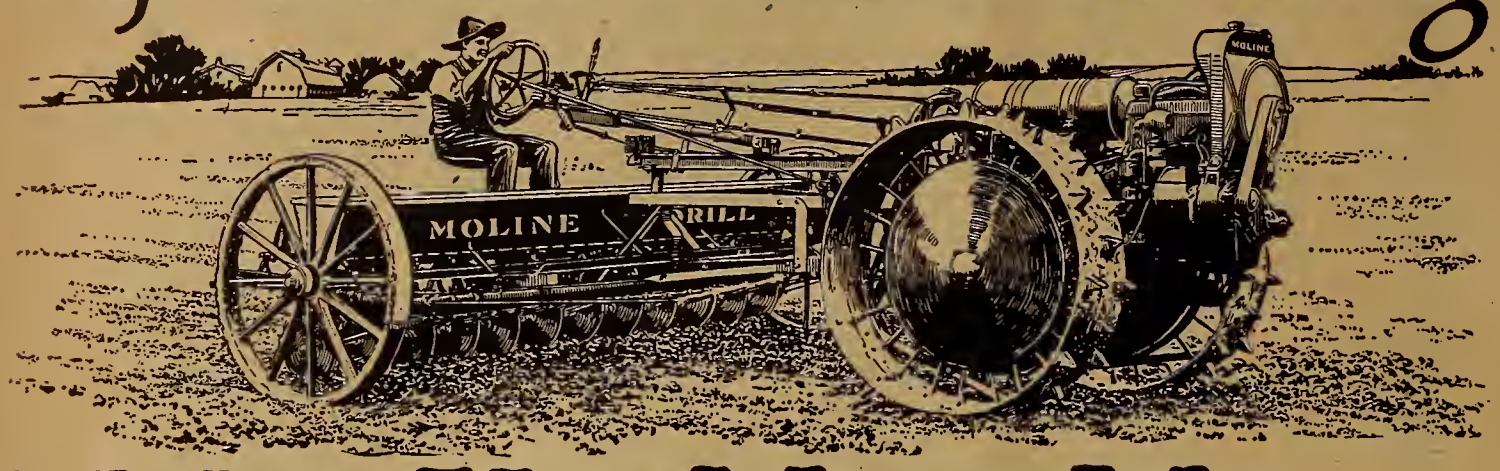


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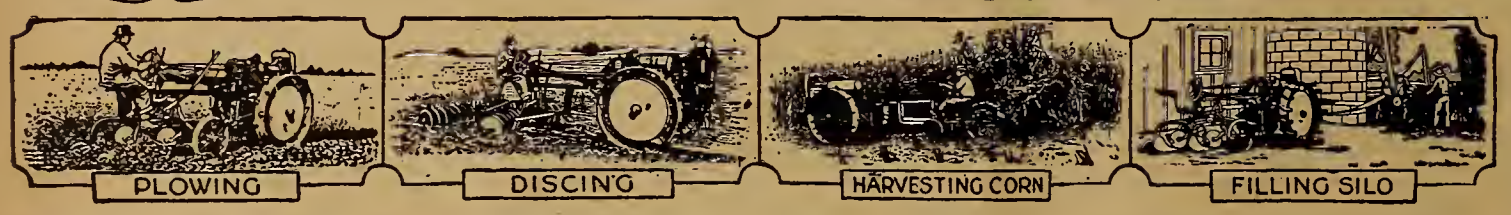
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Before You Spend Your Money

[CONTINUED FROM PAGE 10]

they would have told him he was crazy.

As an additional inducement the promoters in this part of the country were planting Satsuma oranges in between the pecan trees. The oranges, being a quicker bearer, were supposed to give an added profit, and when the pecan trees got large enough to need all the ground, they were to be cut out.

The promotion crowd were planting the orange trees the same as the pecan trees, in raw, sour land, and in many cases on land utterly unfit for citrus fruits.

Furthermore, the cultivation and spraying and fertilizing were done in the cheapest possible manner, and in such a way as to stunt and retard the growth of the trees. I have seen independent buyers plant younger trees, and plant them a year later than the big company, and in a year's time be ahead of the promoters.

I resolved to look around and see what I could find out. I got in touch with the best government expert on pecans, and was told by him that a pecan grove couldn't be on a paying basis in less than ten years—just double what the promoters were telling their prospects.

I decided that the Satsuma orange, properly cared for, was a better proposition than the pecan, and after getting part of my own land in shape I planted one of the first solid orange groves in that section. When prospective land buyers came and asked questions, I tried to tell them the truth as I knew it; and as a result I got in bad with land agents, promoters, and non-resident owners.

With the local resident owners who realized existing conditions and who had the same things to contend with that I did, I was always solid. Every one of them—men, women, children, and negroes—were all my friends.

I found that about the most unreasonable person in the world is the fellow who has been stuck by a fake-land proposition and then tries to make someone else the goat for his own short-sightedness and foolishness.

In my investigations I found that land which was selling for from $25 to $50 an acre as raw land could be bought from local owners at from $5 to $20 an acre; that all of the people of the locality looked upon the people buying that land at such high prices from promoters as "Yankee suckers." I found that not one person out of every thirty who bought such land gave the same careful business investigation to it that they would have given to any other proposition.

The sources of information which I used to investigate—the government experts, the county agents, the banks, the business houses—those sources were open to every prospective purchaser, but not one in fifty took advantage of them, nor paid any attention to them when they did.

Personally I never regretted my purchase from the map and the land agent, but I never followed in the beaten path of the promoters, and I didn't pay any $250 or $500 an acre.

When I have looked over those holdings of those far distant buyers who paid those prices, it made me shudder. There, a thousand miles away, were business and professional men, teachers, farmers, preachers, widows and working men and women plugging away in the big city or on the farm, and scrimping and saving to make their monthly payments, all the while dreaming of the day soon to come when they could retire to their Southern "plantation."

And here, on the ground, at the other end of that thousand mile rainbow, roughly broken, sour, undrained land being planted to trees that must surely die and be replaced; weeds head-high through the groves, trees badly in need of pruning and spraying—what an awful contrast to the dreams of those who have yielded to the song of the promoter!

The picture which I paint has happened and is happening in thousands of cases. In this particular case the start of those dreams and those pecan groves took place about ten years ago, and the owners have not yet had any returns to speak of.

If you feel the lure and must answer it, if you must make a change, you at least owe it to yourself and to your family to investigate thoroughly before answering the call. Think three times and then stop and think again, and then use every available power at your command to investigate every angle of the proposition thoroughly.

Is There a Fortune on Your Farm?

[CONTINUED FROM PAGE 13]

fully open the change could have been brought about many generations ago.

Back in the days of the Cleveland administration a supposedly learned member of the staff of the Interior Department made a tour of the Great Plains country—that section of the West between the desert proper and the fertile region of the Mississippi Valley. This gentleman, after a careful study of the region, reported to his department that the Great Plains country would never be of any value agriculturally except as a sparse grazing country. Yet to-day the Great Plains country is the premier wheat country of America, and played the leading rôle in furnishing food to win the war. All because a farmer named Campbell, with his eyes wide open to opportunities, worked up the dust-mulch system of dry farming, whereby wheat was made a highly profitable crop.

Now let's look South again: Twenty years ago the sand-hill country of North Carolina was regarded as worthless. Fifty cents an acre was a good average value for land. The soil is little but pure sand for 20 feet or more down. But the climate is pleasing, and a hotel man established a winter resort at Pinehurst, right in the heart of this sand-hill region. Soon there arose the problem of getting vegetables and milk for his guests. He decided to attempt raising them himself. A way was found. Cowpeas and commercial fertilizer worked a revolution in the soil. After turning under a few crops of pea vines he was able to produce 60 to 70 bushels of corn per acre. The system spread gradually, until now the sand-hill country is one of the most prosperous in the State. No farmer expects less than a bale of cotton to the acre, and other things in proportion. Land values have jumped 4,000 or 5,000 per cent, and prosperous homes now dot a land that once seemed destined to poverty. All because one man used his head.

A little more than a generation ago the eastern shore of Virginia was about as backward a land as can be imagined. To-day it teems with wealth. It is peopled by a prosperous home-owning population. There are splendid homes and schools and roads. Practically all the younger generation go away to college. The change was made by the people discovering and using the opportunity for growing early vegetables for the great cities of the North

Cases like this can be cited indefinitely; in fact, there is not an incident, so far as I know, where a region has been remade that the farmers have not been pioneers. In the little details of management where they have struck a snag here and there, agricultural science has come to their aid. In the big things, the things that have been vital to their destiny, the farmers have blazed their own trail.

I sometimes think that through so much publicity being given so-called agricultural science there is danger of the farmer being lulled into the belief that his thinking has been ready made down at Washington or at his state college and experiment station. Such is far from the case.

Just a few of the big discoveries of regional adaptation have been made to date. These discoveries will continue for all time. The farmers themselves will make them, or perchance overlook them for many unfortunate days to come. It is a question of keen observation, and then decisive action on the thing observed. *You*, too, have *your* share in this work of watching and discovering, on your own farm and in your own community.

How to Treat a Worn Clutch

By P. T. Hines (North Carolina)

AFTER an automobile clutch has been tightened to its last notch it often begins to slip at a time when it is impossible to reface it promptly. When this happens something must be done in the way of a temporary repair if the car is to be used.

A good way to overcome this slipping for a time, in the ordinary cone clutch, is to remove the floor boards of the car, push in the clutch pedal so that the clutch members will be separated, and then sift Fuller's earth on the face of the clutch.

Start the motor, and then engage the clutch and let the earth become well rubbed into the clutch facing. Repeat the operation until the clutch holds.

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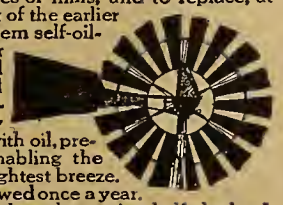
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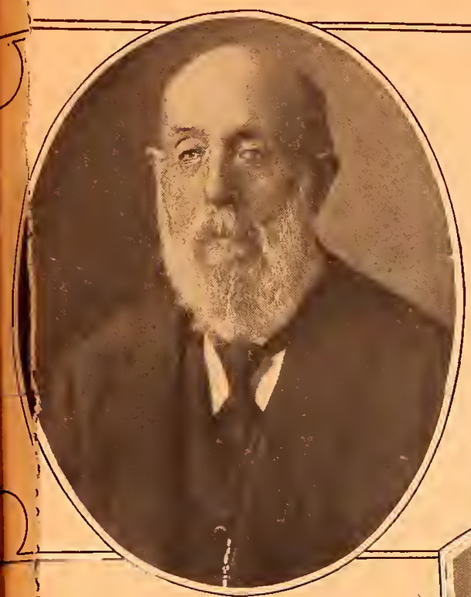
MISS AURELIA EDWARDS of Kansas has had a picture taken every year for twenty-one years, but considers this one, taken twenty-one years ago, the only one that does her justice. She is an old maid—*and she hates cats.* Her pets are two land turtles and a king snake, which have the freedom of the house, waddling and wriggling about to their hearts' content. Or do snakes have hearts? We don't know. She has $1,000 in Liberty bonds, all fifties, so she "won't lose so much" if she loses one of them, she says.



UNCLE JACK LEONARD of Massachusetts was a freight conductor. He had a great habit of unloading without stopping. He'd throw off a stove at one place and a box of clocks at another. Once he had a car of sheep for a certain stop, and, instead of stopping, he kicked the door open, let the sheep jump out as he passed the station, and tossed the waybill after them. Thank Heaven he wasn't delivering babies or nitroglycerine.



THIS is Great-Grandfather Cameron of Michigan. He hates women. If his special coffee cup is not filled exactly to the gold line near the top, and his bowl ditto, he hurls the contents into the fireplace. He doesn't "hold with the edueating of females." When his fields are ripe for harvesting and he has "a call to preach," he leaves the harvesting to the other folks. Do his female relatives march in suffrage parades? Well, indeed they do!



HERE is Cousin Silas H. Cobb of Norton, Massachusetts. He was trusted, liked, and laughed at by everybody. He was a farmer, surveyor, deacon, representative, justice of the peace, executor of estates, guardian of orphans, and town weather prophet!

The last of his family, he went to seed with the place. The house had not been painted since 1814; nothing had ever been thrown away, and the executor sold 2,200 pounds of rags and papor from the house alone. The sixteen farm buildings, all once equipped with lightning rods, even to the pigsty, had dwindled to four. The last lone hen died, lamented, at the age of thirteen. He bought one apple pie a week, and worked out a cardboard pattern to cut that pie into exactly seven pieces, one for each dinner.

NOW we take great pleasure in introducing to you Mr. John Streeby of Tennessee, the only man in the world who never turned to the left. Once when he was a boy he heard a preacher say: "Turn to the right and go straight ahead!" and he took the tip. If he wants to go to the left he turns completely around to the right, and goes ahead. It's a wonder he isn't lopsided, using one part of his machinery so much. But, then, maybe he thinks left-handed, and evens things up.

Photo by G. C. Baum





HERE we have Uncle Jason McConnel of Texas, the original of the remark, "All dressed up and no place to go." Uncle Jason lived for eighty years in the same town and never went any place, but never a day in all that time he didn't make preparations for a long journey. He kept all his clothes in a big carpetbag, and examined the contents thereof every night to make sure he was ready. When not working, or preparing for the journey he never took, he played the fiddle—and always the same tune, "The Arkansaw Traveler."



COUSIN AVERY CRANDALL, formerly of Cheboygan, Michigan, and now of a Wisconsin farm, was a talented photographer, and found great delight in amusing and terrifying his relatives with pictures which he both posed for and took himself. You never could tell what sort of a photographic concoction he was going to turn out next. To make the kin feel all well and jolly at Christmas time, Cousin Avery made this tender little remembrance, in which he appeared as waiter, consumer, and consumed all at once, for the family stockings.

Photo by Crandall and McBride

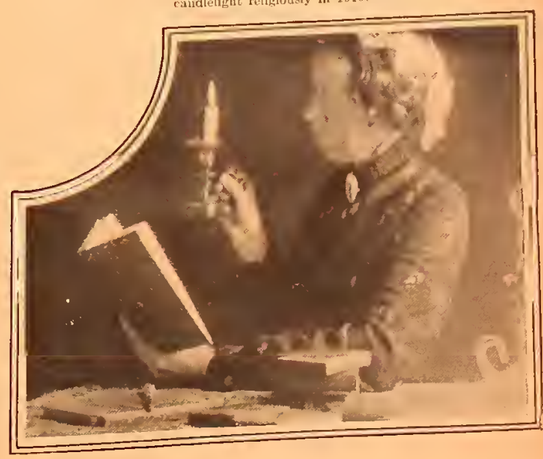


FOLKS, this is Cousin Agnes Wooten of Kentucky, who has never had any clothes of her own. Her ma discovered a couple of trunks full of ancestors' duds in the garret one day when Agnes was a baby, and decided that Agnes might as well be the goat and wear them out. Agnes has been at it ever since. Here she is at twenty-two, and, as you can see, she isn't through yet. Having worn some made-overs of Brother Tom's ourselves in our childhood, Agnes, we can sympathize with you. Here's hoping they give you a new dress for your fiftieth birthday, Agnes.



AUNT JANE GAGE, the stingy old thing, might have spared Cousin Agnes Wooten some of the fancy duds she never wore. Aunt Jane lived alone on the old home place in Illinois, and died recently of pneumonia because she was too scared of fire to build enough to keep her warm. She always wore the plainest of black dresses, but after her death nine silk gowns, a dozen lovely hats, jewelry, and fancy togs of all kinds that she had collected and stored away were found around the place. There's peculiarity for you!

MISS TABATHA ANDREWS, once of New England, now of Colorado, lives in a beautiful home flooded with electricity served up in the most modern ways, indirect lighting and all, but still she prefers candlelight to read by. Her Bible read by any other light than her accustomed candlelight wouldn't be the same old Bible to her. She says: "There is no light that really compares with the restful, mellow glow of the candle that can be adjusted with such ease to exactly the degree of light wanted." So Miss Andrews continues to use candlelight religiously in 1919.



What I Learned From Mrs. Cummings About Blue-Ribbon Canning

By Jane Wallace

AS I go about my work of judging canned products at fair after fair in the summer, I try to visualize the women behind those cans who have worked hard many days to get such beautiful results. Often, as I pin on the blue and red ribbons, I wonder if these women are doing it easily, or if their families and their neighbors scowl and say:

"Well, I'll be so thankful when canning season is over and Mary can be herself again."

I have talked to these women enough to know that some do do it easily and others are completely tired out by the time the cans I am judging reach the fair. The difference between these women's work is not so hard to bridge. I believe it would be perfectly possible for all of us to turn out blue-ribbon cans from our kitchen factories, and not be worn out in the process either, if we have the spirit in the beginning that we shall watch our movements with a military eye that will sentence any useless work, any worthless tool which wastes more time and effort than it saves, to immediate court martial. We must train our soldier eyes, fingers, and bodies to use the effective weapons of warfare so effectively that when they are on duty they are constantly at attention.

In one particular town where I had judged fairs each year, I learned to know that the name "Mrs. Cummings" belonged to a woman whose cans were always the blue-ribboned ones. I asked one of the town women about her.

"Mrs. Cummings is one of the most energetic women I have ever known," she said. "Not that she is the nervous, excitable type of woman. On the contrary, she is never in a hurry when she comes to town. One likes to meet her on the street, for she speaks as though she were pleased to do it. Clerks like to wait on her in the stores, for she is a capable buyer."

I determined to meet Mrs. Cummings and talk with her, so when she came to gather up her blue ribbons that afternoon I introduced myself and explained how interested I was in her wonderful canning success.

"Wonderful nothing!" she said. "Every woman could do as well as I have if she would just watch herself and figure out short cuts."

"To what do you attribute all these blue ribbons? To your short cuts?" I asked.

"Hardly short cuts," she answered laughingly. "I believe my equipment has as much to do with it as anything. There is no use trying to can unless you have good tools. That is not saying expensive ones, but tools that are durable and useful. My sterilizing vessel varies with the number of cans I have to boil. When I have 50 to 100 quarts I scrub up my wash boiler and use that. But I am seldom doing that many on the days I put up my prize cans for the exhibit, because I do spend more time on my exhibit cans than on those we use at home, and the combination is too much for one day when I know there are other days coming. On my exhibit days I use a heavy galvanized pail which will hold three cans comfortably.

"In the wash boiler I use a piece of stiff wire netting cut to fit it, with edges beaten down. For the pail I happen to own a round wire rack which I have always used as a cake stand. It just fits the pail and keeps the cans up the necessary one-half inch from the bottom.

"When I first began my cold-pack canning I used my long-handled pancake turner, bent at the end of the handle at right angles, to lift the cans in and out of the water. It worked fairly well, but had a tendency to catch the false bottom. It also made it necessary for me to hold the top of the can with my left hand to steady it as I removed the can to the table where I screwed the lid on tightly. As soon as I went to a larger town I purchased at the hardware store a pair of tongs made especially for this purpose. They cost me 35 cents, and worked splendidly. It's a great saver of time and nervous energy to own one.

"Two other large kettles, a wire basket, and a few yards of cheesecloth are the only other things I have in my equipment besides the all-important jars."

All-important jars—she's right about it. As judge I know the value of the good jar for display purposes. I do not advocate any particular brand, but use the clearest glass of the brand you have. The lids must be absolutely spotless and shining. Only in a clean, shining jar will your fruit be done justice in the exhibit, good as the product itself may be in both looks and taste.

If quantities are being sent, see that all your containers are uniform. The exhibitors are just as anxious as you are that the food looks well, but they get pretty discouraged if you send one two-quart jar of pickled apples to stand beside a pint jar of beet relish.

For either home or exhibit use the labels are essential. Many a time I have tried diligently to decide whether that can in the front of my fruit closet was apricot marmalade or plum butter, when a small piece of paper stuck on the side of the jar giving the name of the material, the date canned, and the cost would have given me any information I might desire.



Mrs. Cummings, whose cans were always blue-ribboned ones

In my work as judge I hold the label as an important factor. If a woman sends her cans with uniform labels pasted on the cans an equal distance from the top of the can, and labeled either in clear printing or typewriting, I think she deserves more than the woman who sends hers with no label at all, or with odd sized and shaped ones written so that it is easier for me to tell by the contents its name than by studying its label.

"Would you mind telling me more about your process of canning, Mrs. Cummings? For instance, how did you get this good-looking can of beans? And those tomatoes of yours are the nicest, I believe, that I have ever judged."

"Do you like that can of beans? I am pretty proud of that myself. I sorted over my beans carefully, getting them even in length and in thickness. After sorting and washing I blanched them. Always in canning I have boiling water in one of the big kettles and cold water in the other.

"A piece of cheesecloth about one-half yard square does for purposes of holding the beans while dipping them in the boiling water to blanch them. Since they were young and tender I found five minutes long enough for blanching them. Then I quickly plunged them in the cold water, and out again.

"After blanching, the beans were ready to pack in the clean hot jars which I had already proved to have good seals. I always do this testing before the canning season proper begins. I buy the new rubbers and the new tops, then fit them on the cans.

"To test the seal I put water in the cans, seal them, and turn them upside down overnight. If no leak shows then, I call the can safe, release the seal, but leave the top with that can.

"Beans can look worthy of a prize if they are cut up or left their full length, but I always leave them full length and pack them in a pint jar because they are the right length to reach from top to bottom, and it is easier to get them even and symmetrical. I tip my jar to the side, and fit one closely against the other. I have found that sterilized hatpins will help when extra fingers are needed to hold the outside layer in place.

"It grows easier as you near the inside of the can, but care must be taken that the material is in very tightly, so that when the boiling begins they will not be dislocated and the symmetry spoiled. On the top I put one-half teaspoonful of salt, then fill the can to overflowing with boiling water, pouring slowly on the beans, so there will be less danger of breaking the glass. Right here I take great care to see that no air bubbles are left in the can.

"Then I make the seal. Of course, here the next step depends on the kind of jar I am using. If it is a jar with a screw top, I make the seal, then bring back the lid one inch, thus avoiding the bursting of the rubber which would come otherwise when heat is applied. If the jar has a clamp top, I put the clamp on the lid, but do not close the second clamp down until after the processing. I keep this first can hot until I prepare the other two cans, then put them all in together.

"In lowering the cans I always take it by easy stages, dipping them in and out about three times slowly so the heat will not be too much for my jars. After they are in, and I know there is at least an inch of water above the top of the can, I put the lid down carefully, and then there is nothing to do except to watch the time."

"You surely have your beans down to a science. Would you mind telling me a little about those cans of tomatoes?" I asked. "They look so nice and I just can't tell you how many women come to me and explain that they simply cannot can tomatoes."

"In my estimation," she said, "tomatoes are exceptionally easy to can. I feel rather on a vacation in canning when their time comes around. I use either the cold-pack or open-kettle method, depending on the use I want to make of that can. For instance, on the label you see I have "For salads." That can I did by the cold-pack method. They are firmer and much better for salads than the ones I cook by the open-kettle method. Those I use for soups and stews. In this "For salads" can I used average-sized tomatoes freshly picked from my garden. I scalded them, then plunged them immediately into the cold water, and out again. I like to dip only a very few tomatoes at a time, so there will be no danger of mashing any. The skinning should be a quick process if the tomatoes are firm. Then comes the process of filling the cans again.

"If the tomatoes fit in more easily by cutting them in halves, I would do it that way. The way I did this can was to put one whole one in the middle of the bottom of the can. I arranged the half tomatoes around this, continuing the process until I reached the top of the can. The result is good. The tomatoes need the processing only twenty-two minutes. Too much boiling means a mushy result.

"In general, that is the method I use in canning all my fruits and vegetables," she said, "only changing my time limits to suit the particular food. I have the government bulletin time schedule, and go by that when my fruit or vegetables are average in their size and age. When they are not, I use my common sense to help me out, and very seldom lose a can."

We could all be blue-ribbon canners if we used our printed directions with the always essential common sense. If the beans are very old we shall have to think of that, and increase the blanching and boiling time accordingly; and, on the other hand, if it's rhubarb, fresh and juicy, it will take less time than some bulletins give.

Let me tell you some of the points I consider first in the general exhibit, and then, as I narrow my interests, those things I notice in individual exhibits and individual cans.

I notice the general arrangement of the exhibit. I test it by the following questions:

Will it attract the attention of passing visitors and cause them to stop?
Will it hold their interest?
Will people talk about it afterward?
Is it clean or does it attract flies?

Then to come down to each woman's exhibit, I ask:

Are the containers uniform?
Are her labels neat, clean and legible?
Are her containers absolutely clean?
Are the tops without blemish?

By the time I have reached the one-can stage I usually have it up in my hands, and am looking it over quite minutely.

Here is the general score card I use:

GENERAL APPEARANCE—	
Color	10
Shape	10
SOLID PROPORTION—	
Proportion	15
Flavor	15
Condition	10
LIQUID PORTION—	
Proportion	15
Flavor	15
Condition	10
Total	100

By general appearance I mean the natural color of the fruit or vegetable and the uniformity of shape and size. The proportion of solid material must be as large as possible. I do not approve of canned water.

By flavor I mean the preservation of the natural flavor as nearly as possible. In fruit the syrup should not be too thick and vegetables should not taste strongly of salt, vinegar, etc.

The condition means its general ability to hold its shape. Peaches, for instance, should look like peaches, and not be mashed.

Look your cans over with these things in mind before they leave home and you will be able to tell with accuracy the treatment they will get at the fair.

Why We're Here

IF YOU have spilled ink on your favorite bedspread and want to know how to get it out, if you are remodeling your home and want to know how to arrange your kitchen so that your work will be lightened, if your breakfast cereal is always lumpy and you want to know how to keep it smooth, why not ask us? Ask us about anything that is puzzling you. We shall turn your letter over to our expert on whatever subject you write about, and she will be glad to help you. That's what we're here for, you know. The address is 381 Fourth Avenue, New York City.

THE EDITOR.

A Community Picnic

By Emily Rose Burt

UNDAY-SCHOOL picnics have long been popular, but a community picnic may include not only one Sunday ol but all the Sunday schools, as well the rest of the folks in town. In fact, one of the best little get-to-gether plans you can think of for a village or town. the first place, of course, a committee st be appointed to do the planning. e people most interested will take the iative and do the engineering. It is sible to ask the different local organi-ons to co-operate.

house-to-house canvass to find out is interested to go and to contribute ard the slight expenses is desirable. inquirer should also find out who are be depended on to furnish their own for transportation, and whether they and will carry additional passengers. After these preliminaries, and after tling upon a suitable and available place the picnic, a few striking posters will ouse enthusiasm. They should be let-red in red on a white background, and ight be worded somewhat as follows:

COMMUNITY PICNIC
for EVERYBODY at LEONARD'S WOODS
me to the green (or town hall) at ten o'clock, if you want to ride.
BRING BASKET LUNCHES!
ear a costume for the parade and prepare for fun!
COME ONE AND ALL
ou're not too old, and not too young!

The committee on transportation, after ding out pretty closely the number to ect, may arrange for jitneys or hay-ks to accommodate the crowd. And ry one of the vehicles should be deco-ed in some gala style. A hayrack with ts at the corners may have wire strung ween hung with red paper bells or panese lanterns. Bunting, flags, and per streamers are always effective. turally, there will be plenty of patriotic corations.

There should be plenty of monitors th some badge of ice to direct the ating and prevent nfusion. Then, as e wagons and auto-biles are ready, ey may move off in real parade toward e picnic grounds.

Upon arriving ere the dinner com-ttee comes into ominence. Long anks on sawhorses rve as tables for e basket lunches, d if the funds hold it tubs of lemonade ay supplement the me supplies and ove popular with e youngsters.

The amusement mmittee will have he greatest task of ll, because some-hing should be planned for the small children, the larger nes, and grown-ups. For instance, someone who gets on well with little tots may keep them happily together playing ring games.

The older children and the grown-ups will be entertained by a parade. Probably some will have brought or worn picturesque accessories. The others may be supplied in groups with paper caps, whistles, horns, and bells.

If there is a Boy Scout band, that will be a great addition to the parade, and may lead off. A hurdy-gurdy would be a tuneful feature.

There should be a number of parade surprises, as for instance a couple of giant Teddy bears, which are really, of course, some fun-loving boys inside of canton flannel costumes and masks. In fact, there might be quite a comic animal parade if a group of ingenious young people would be willing to contrive costumes. The type of parade could be announced on the posters.

The children of your community will enjoy dressing up in the cast-off finery of grown-ups and passing as strange specimens of society.

After the parade a loud gong announces dinner. Following that could be a brief program. Everybody would sing "The Star Spangled Banner;" the Boy Scouts, the Girl Scouts, the Camp Fire Girls, or any local club might give a play or pantomime; a local celebrity might make a short speech, preferably humorous. As a windup to the program proper there could be a little community sing, for which a good song leader is necessary.

Races and competitions in which any number of contestants may join are always popular. Besides all the old ones like the sack race, the potato race, and the obstacle race, a few original ones are in order, such as a balloon race, a chicken race, a pail race, a powder race, a perpetual motion race, and a somersault race. The prizes may be funny favor men or animals adorned with splashing bows of ribbon or crêpe paper.

The sounding of the gong indicates the time for the calvacade to start for home. Four or half-past four is a good hour to select.

Such an affair is lots of fun if everybody goes and enters into the sport. It's not a great deal of work if the responsibility is well divided and the proper interest is taken. Try a Community Picnic in your town!

NOTE: Directions for half a dozen races for a Community Picnic; i. e., the balloon, the chicken, the pail, the powder, the perpetual motion, and the somersault, will be sent on receipt of a stamped self-addressed envelope. Address Entertainment Editor, FARM AND FIRESIDE, 381 Fourth Avenue, New York City.

Prize Contest Announcement

How Do You Entertain Yourselves?

WHAT do you do at your parties? Won't you write and tell us about them? Tell us about some party you planned that was an unusual success. We don't care what sort of a party it was, whether a birthday for eight-year-old Mary, a church social, an anniversary celebration for your uncle, a Hallowe'en party, or what. We only ask that the ideas be your own, and that they be something you have tried out and know to be fun. Tell us about the invitations, the games played; about the decorations, the refreshments, etc.

We will pay $5 for the best description of an original party reaching us by August 20th, and $3 for every other one we print. Address Entertainment Editor, FARM AND FIRESIDE, 381 Fourth Avenue, New York City. Look for the prize-winning parties in the November issue. We cannot return unused letters unless self-addressed stamped envelope is enclosed.

ENTERTAINMENT EDITOR.

Scallop in Leaf Design



THIS attractive design is especially appropriate for towels and pillow slips. Complete directions for crocheting it will be sent to you on receipt of four cents in stamps by the Fancy-Work Editor, Farm and Fireside, Springfield, Ohio. Order No. FC-117.



When it's 90° in the shade

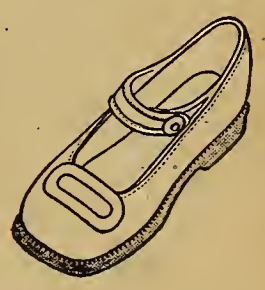


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UNITED STATES RUBBER COMPANY — US — RUBBER SYSTEM — AND ASSOCIATED COMPANIES

Something You Can Do to Make Your Children Strong and Well

By Anna Steese Richardson

UNLESS all signs fail, there will be different doings in rural schoolhouses this year.

When war was declared, your schoolhouses rang with patriotic appeals for men and money. Later they became receiving and distributing centers for war relief. And in both lines they made good.

Now they are to be used for the mobilization of a new army—an army of peace, the good-health legions, whose leaders will conscript every child in the rural schools.

With this statement your school board may take issue:

"Nonsense! We have good schoolhouses and healthy pupils, and now that the war is over we're going to get right down to the three R's."

For a few weeks, perhaps, yes; but some day your county superintendent of schools will return from a conference at the state capital and say to a group of teachers:

"We will consider to-day the health hour which is to be introduced into your regular program of work." And then he will proceed to define the new phrase, "Health hour."

Or, if your wife happens to be president of the County Federation of Women's Clubs she will receive a letter from the state president asking, "What is your child-welfare section doing to promote health education in your schools?" Whereupon your wife and her child-welfare committee will scurry around to discuss the question with teachers and school board.

Or, your most progressive physician coming home from a medical meeting will announce to your school board: "See here—something's got to be done about health standards in our school! They're doing it all over the country."

By this time your curiosity will be aroused, and you will wish you knew how to talk or vote on the question of health education, if there should be any local dispute; so why not learn about it now?

Seat yourselves on the magic carpet of printer's ink and ride to a granite skyscraper on Fifth Avenue, New York City, where you will find the high command of the good-health army in process of mobilization the country over. On the door of headquarters you will see this sign, "Child Health Organization." In one of the simply furnished offices you will meet a bright woman who corresponds to the intelligence officer of America's National Army, and the story which she tells you runs something like this:

"When the United States mobilized its army for the Great War, approximately four million men of fighting age were available for military service, volunteers, and drafted men. And approximately one million, or one fourth, were pronounced unfit to bear arms.

"A few of the rejected ones crossed the border and enlisted with the Canadian or British Army, whose desperate need of men lowered physical standards. A still smaller number placed themselves under surgical or medical care, and, in an amazingly short time, were in condition to serve this country. The vast majority fell back on their jobs, but with a new disquiet in their souls.

"They had been pronounced physically unfit!

"Were they in condition to make good in industrial, commercial, or professional life?

"Handicapped by such physical defects as Uncle Sam's medical examiners had discovered, could they ever realize the success of which they dreamed?"

And when one million boys and men were rejected, almost as many mothers, wives, and sweethearts wept or sang with relief. Their dear ones were safe from the Huns.

But in time this relief changed to subconscious dissatisfaction. Mothers of boys who had been rejected did not care to meet mothers of boys who had been accepted. The rejection reflected in a way on Son's upbringing, his mother's homemaking or cooking. Wives of disqualified men found themselves explaining elaborately that Bill and Charley and Jim were going to the gymnasium daily, or taking a new tonic, or trying a new doctor. Girls engaged to men who had returned to civil life suggested the change of job which might take their sweethearts outdoors, or perhaps the family doctor might help.

You might thank God that your man was safe on American soil, but—you wanted him to come up to standard.

And, strange to say, factory workers and tenement dwellers did not have a corner on physical disqualification. Dear no! Thousands of those rejected boys came from comfortable, well-furnished homes with overflowing larders.

I recall the pitiful despair of a boy rejected by every branch of the army and navy service, who had been born and raised on a prosperous farm, where good food is always abundant. He had been educated at college by generous parents, and had gone from college to a paying position, and yet he was disqualified by a disease which could be traced directly to malnutrition. His mother admitted that from childhood he had never taken time to eat properly. She had never been able to train him to chew his food well, and, after washing down unmasticated meals with water, milk, tea and coffee, he had raced back to school or library as fast as his legs could carry him. Once in business he ate at his desk, or propped a book before him at a lunch counter.

Another family friend was rejected because of diabetes which could be traced to overindulgence in sweets from babyhood on.

So many of these young men appealed to family physicians for advice, or blamed their condition on their parents, that all America was shaken by the realization that it was not a nation of fine, sturdy, efficient men. One million of its sons had been *proved physically unfit*. At least one fourth of its young men had failed Uncle Sam in his hour of need.

So, while the majority of Americans watched the casualty lists from the French battle fields, a small but earnest minority was helping Uncle Sam to solve the riddle: "Why are the sons of America, the richest and most intelligent nation in the civilized world, physically deficient?'

In this hard-working group were intelligent parents, doctors, educators, social workers of national reputation, and hundreds of those inconspicuous but valuable co-operators, public school teachers. And they have found the answer. It is neglected youth!

Not drunkenness in fathers, depriving children of life's necessities! Not poverty, preventing the purchase of nourishing food! Not maternal ignorance nor laziness! Just carelessness in the home, the kitchen, the lunch basket! Just the blind, thoughtless belief that if a child passes safely through the teething, toddling age, Nature will safeguard the rest of his development.

These investigators of national standing found this answer in the nation's school, not the schools of congested cities like New York, Chicago, and San Francisco alone, but also in the small-town and the rural schools. Of 30,000,000 school children, it is said that 15,000,000 are suffering from slight physical defects for the most part correctable or curable, while 6,000,000 are below normal standards of physical and mental developmen because of malnutrition.

Into thousands of American homes the Great War has brought grief, suffering, and privation. In its train came influenza, mowing down more thousands, who to all outward appearances were in the finest physical condition.

Now if the war proves that the hideous death list from influenza was due largely to the invisible lack of resistance to disease, due in turn to physical defects acquired during childhood and youth, and if through a new health campaign the children of today are freed from these defects, and therefore provided with physical resistance to disease germs, then the war may be counted a blessing as well as a curse. For out of this knowledge and a determined, nation-wide campaign we shall rear a new body of 30,000,000 youths, each strong and efficient, not to wage war, but to rebuild the nation, to achieve that great success which includes happiness.

Every mother, every father, in America, irrespective of means or social position, wants healthy children. Health is cheaper and more convenient than illness. It spells peace in the home while children are young, care and devotion for parents in their old age. The best investment the head of the family can make is good health for his growing children.

And if the Child Health Organization carries its campaign into the country's schools, public and private, the investment can be made by every parent, at a very small expenditure of time, thought, and money.

The Child Health Organization is a body of public-spirited citizens banded together to raise the health standards of American children, by teaching health habits to the children, by securing adequate health examinations and health records for all public-school children of the country, by considering the urgent problem of malnutrition among school children, by safeguarding the health of children in industry, and by interesting the public, parents like you and me, to secure legislation covering the points named above.

Perhaps you say, "Oh, we have no factory children in our community to be safeguarded." No, but you have school children who, though coming from prosperous homes, may be suffering from malnutrition.

"Nonsense!" cries Father. "I know how much they eat. I pay the bills." But the Child Health Organization has an answer for this. The costliest food is not always the most nourishing, especially when it is not eaten at regular intervals and under proper conditions. And what profits your child if you buy for him steak at 50 cents a pound but let him spend six hours daily in an unventilated class-room, or go to the movies, night after night, when he ought to be rebuilding tissues in sleep?

But we are getting far ahead of our story, so let us go back to the Child Health Organization.

There is scarcely a rural district in America which has not heard of the Better Babies movement and the Better Babies contests. Scarcely a state or county fair but has brought together parents and doctors for the physical examination of babies and the awarding of medals and prizes to the children scoring highest. And everyone knows how infant mortality was reduced and baby health [CONTINUED ON PAGE 41]

You'll Never Know What's in the Box Till You Pry Off the Lid



Courtesy of Children's Playground Association, Baltimore, Md.

The best investment the head of the family can make is good health for his growing children

WHEN you get a birthday package you may think you know what's in it, because you recognize the handwriting on the outside, and you know what that person said she was going to send you. But when you open it, it may be something entirely different.

The same way with our health. Until we opened our national health package and looked at its contents through the eyes of the physicians who handled the draft examinations, we thought we were a pretty strong, husky lot. But we found just the opposite. Twenty-five out of every hundred men were declared unfit. A lot of the unfit ones came from farms, too. Many of their troubles were traceable to wrong eating and living habits when they were children.

We have also found that fifty out of every hundred of our school children are more or less unhealthy because of wrong living habits.

There is a remedy. And Mrs. Richardson tells about it in this article. Read it. Maybe it will help you to help your child. THE EDITOR.



Courtesy Child Health Organization, New York

Children are much interested in learning if their weight is what it should be

An Imported Dish

I INTRODUCED a new dish into my home last year, and a most popular one has it proved itself to be—muscadine grape paste. This isn't really a new dish either, but one that has been used for many generations in the Old World. We found it especially nice used with cheese, the combination taking the place of a salad.

This grape paste was a popular substitute for candy, too. Also, the children love it spread on bread, and I often put some in their school lunches.

The use of muscadine grapes has been confined almost entirely to consumption in the fresh state and in wine-making, and their value for other purposes is unappreciated.

The unfermented juice of muscadine grapes is the least expensive product that can be made from them, and is very refreshing on hot summer days.

I make the grape paste as a by-product of my grape-juice operations or as a by-product of jelly-making. In this way I utilize the pulp that is left.

Of course, I use only freshly picked fruit—fruit that is just right; in other words, just ripe. Any fruit when just ripe contains more sugar than at any other time, so I save most by using it just then.

After the juice has been extracted from the grapes I put the pulp through a ricer, colander, or similar utensil to remove the seeds. Now it is right for paste-making.

I use powdered sugar for sweetening in my grape paste, as it doesn't require as much cooking to drive off the moisture as liquid sweeteners, such as syrup, and it leaves the paste lighter in color and more attractive in appearance. I use one-half pound of sugar for each pound (or pint) of pulp. If a liquid sweetener is preferred, use one cup of syrup to two cups of fruit pulp.

When the sugar has been added I pour the paste into a large shallow vessel so that it can be spread out in a thin layer. It is best to use enamel ware and wooden utensils, as metal is affected by the fruit acids. The moisture should be driven off quite rapidly, but should not be boiled so rapidly that it sputters and pops out. I stir it often with a wooden paddle, and when it stiffens give it constant attention. When it nears the finishing point I slip an asbestos pad under the vessel to prevent burning and to lessen the sputtering. When the mass is so stiff that it will not flow readily together again when the paddle is drawn through it, it is ready to be poured out. I have an old marble slab on which I spread the paste. Any marble, enamel, or china surface is good. I make the layer of paste about one-half inch thick. Of course, the slab is greased before the paste is emptied on it.

Next I place it in an open window to dry. To protect it from flies and other insects I fashion a tent of cheesecloth over it. I let it stand from ten to twelve hours before cutting, or until it becomes reasonably dry. Then I cut the paste into pieces an inch square, roll the pieces in granulated sugar, and spread them out to dry further. I usually let the pieces dry a couple of days, turning them occasionally, as I know it is a waste of time and material to store paste that is not thoroughly dry.

I have boxes lined with oiled paper, and put a sheet of the paper between layers of the paste. The boxes I store in my china closet, as it is about the driest place I can keep them. HELEN L. CRAWFORD.

One Thing You Must Have in Your Soil

[CONTINUED FROM PAGE 16]

for leguminous crops are the basis of all fertility, will increase the yield of almost any crop, and cannot be grown in soil that is devoid of lime.

Every great and enduring civilization in the world grew up on a soil that was alkaline with lime, not acid. Babylon, Greece, the land of Egypt, Italy, and the richer parts of France are lands rich in carbonate of lime. The hill on which sits Jerusalem is made of lime. Our own rich West beyond the Missouri River has often in its soil as much as four per cent of carbonate of lime, and never, so far as I have investigated, has it less than one and one-half per cent. And when it is scarce in the soil there, you will find it in the hills close by.

Carbonate of lime is the sweetener that God put in soils when He made them as good as He could make them. And the greatest reason for backward farming, abandoned farms all along the Atlantic seaboard, is that the land is lime-hungry. A land hungry for lime is insatiable. Manures will not remain in it, phosphorus unites with silica, iron, or alumina and becomes unavailable; the soil becomes acid, useful bacteria won't grow in it, nor the clovers or alfalfa.

There are vast stores of carbonate of lime all along the foothills bordering on the Atlantic coastal plain, there are unnumbered millions of tons of the stuff ready for the farmer's use. Machinery is ready, capital is ready, railways will fall in line as soon as they are taught the wonderful work that carbonate of lime will do.

The irrigation of desert valleys was a great work, and it is well that it was done. The same sort of work can be done here at home, and the results will be even more profitable to civilization and America. Here in the East we find already the population. Here are now homes, farms, schools, roads, villages, near to great cities, the best markets in the world. Here we find that strange enigma, impoverished and half-abandoned fields within driving distance of such cities as Philadelphia, Baltimore, Washington, New York.

Examine those nearly abandoned fields and what do you find? Always that they are starving for carbonate of lime. Certainly, they are starving for nitrogen and phosphorus as well, but that always follows a lime hunger. Nitrogen will not accumulate in a soil that is lime-hungry.

The bacteria that feed soils with nitrogen do not exist in our soils.

The primary cause of decay of farming along the Atlantic seaboard is the fact that the soils are, without exception, deficient in carbonate of lime. On that primal fact, so long forgotten or never learned, rests all the discouragement and decay that is found from Florida to Nova Scotia. There is no reason in climate for discouragement in the Eastern farmer. There is no reason in markets. His labor is cheaper, and on the whole better, than the labor available to the man of the West, the man of the irrigated valley.

These things dismay the Eastern man: the impoverished soil he inherits, the fearful conservatism, the lack of happy hope and hopeful energy of his neighbors. When the Eastern man has the optimism of the man of the West, when he dreams dreams of his land, dreams not based on what it is now nor on what it was in his father's day, but dreams of what it ought to be and well may be, when he dreams these dreams and smiles and is glad, rolls up his sleeves and goes forth to combat a stubborn soil fact, rolls up his sleeves and shovels carbonate of lime with the same happy enthusiasm as the Western brother shovels gravel out of his canals and grubs up sage brush—when that time comes the East will be the garden of Eden, the East, the envied, happy, fortunate land, land of myriad happy homes, thousands of snug, flowered-decked, tree-shaded villages, land of apples, peaches, grapes, alfalfa, corn, cows, lambs, and happy children trudging schoolward, their little satchels filled with books, their pockets bulging with red apples and never a scale of San José.

If those who have the welfare of the American farmer at heart can teach but one thing, let them teach soil-buidling and trust the farmer to use his wealth aright when once he has it. In this connection it is interesting to note that in the enrollment of students in the Ohio State University the counties having no lime in their soils send no students, those counties rich in lime send most students.

As for the other propositions which I have outlined, they shall be taken up at length in a continuation of this article in the next thing I have to say to you.

[TO BE CONTINUED NEXT MONTH]

NOTE: This is the second of the series of the last unpublished manuscripts of the late Joseph E. Wing. The third article of the series will be published in the September number.

THE EDITOR.

The thrill you get as the band goes by!

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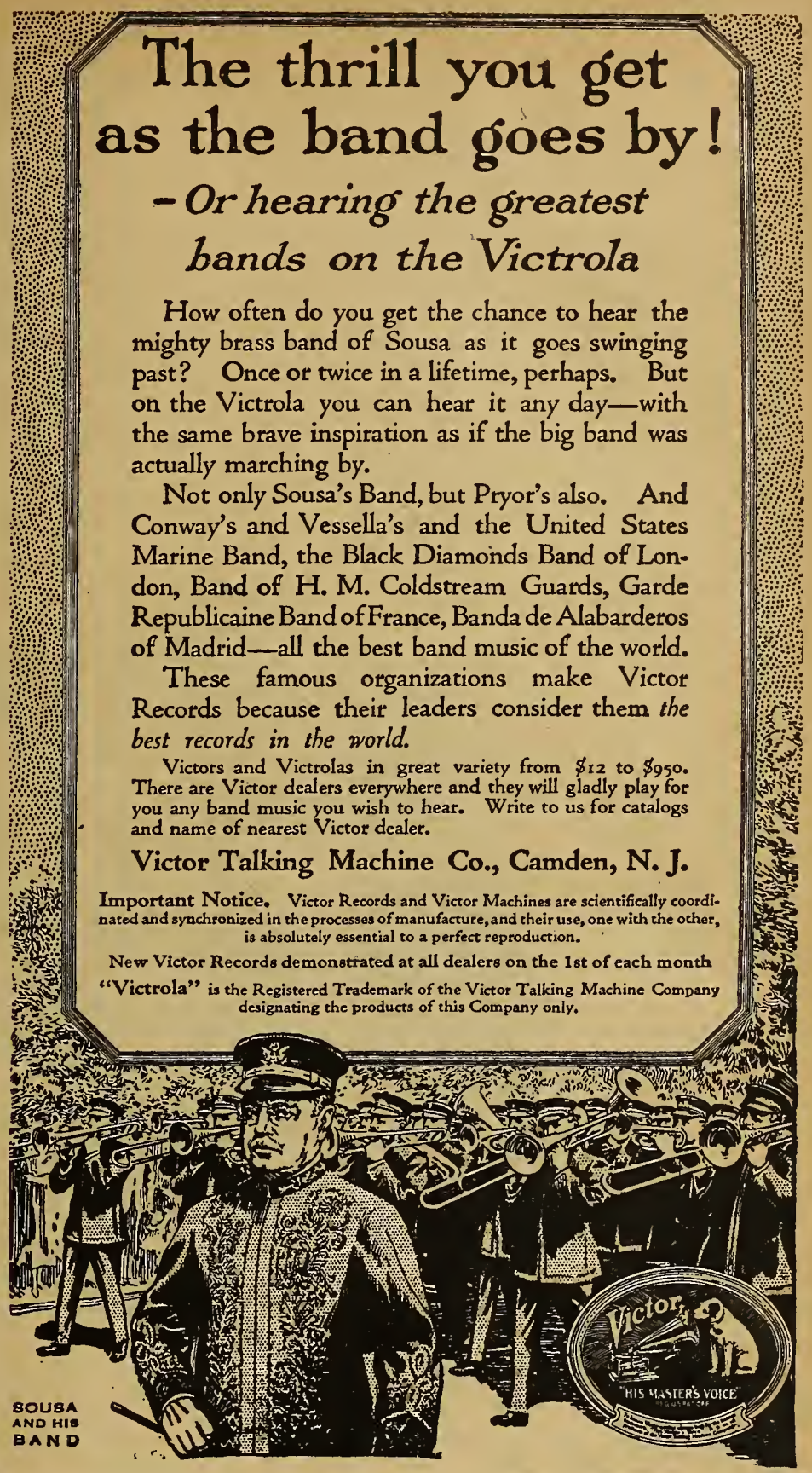
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The Sheep Killer

By Samuel A. Derieux

And it shall be lawful for any person to kill any dog found out of the enclosure or immediate control of its owner or keeper worrying, wounding, or killing any neat cattle, sheep, or lambs.—OLD LAW.

"HELLO, Steve Earle! Helo-o-o!" The hail was clear and friendly, but a little startling on so peaceful a night. It came from out in the big road at the end of the avenue of oaks that led to the house. On the moonlit, white-columned old porch Steve Earle stood up and knocked the ashes out of his pipe. From his mother's lap litle Tommy Earle slipped to the floor, and rubbed the sleep out of his eyes. Out in the hedge-bordered front walk old Frank, Irish setter, rose and pricked his ears speculatively toward the road.

"Hello, Steve Earle! Hello-o-o!"

"All right, John!" called Earle.

Down the long, heavy-shaded avenue pierced by shafts of light, the three went together, father and boy and dog. Out into the big road they came, where Mr. John Taylor sat on his horse, his sandy beard silvery patriarchal in the moonlight. Ahead old Frank had run round the horse and stood looking up at the mounted man, his bushy tail waving, his long ears thrown back, in his friendly, up-raised eyes that touch of melancholy one sees in the eyes of all high-bred bird dogs.

"I guess you've heard the news, Steve," said Mr. Taylor. "Somebody's dog's killing sheep. Jim Burton lost six last night. I lost one myself. I don't know why he let me off so light. Something must have frightened him away." Mr. Taylor hesitated a moment. "I was just riding by. I thought I would tell you. Neighbors are fastening up their dogs."

"All right, John."

Mr. Taylor cleared his throat.

"Of course you know and I know Frank isn't killing any sheep. But usually it's a hound or a bird dog, you know, and neighbors—"

"I understand, John."

Mr. Taylor hesitated a moment as if he felt like apologizing to the three of them. Then he jogged off down the moonlit road, and father and boy and dog turned back to the house.

"Papa," there was a thrill in the boy's voice, "what will they do with him if they catch him?"

"Kill him, son. That's the law."

"F'ank wouldn't kill sheep, would he, Papa?"

Steve laughed. No, Frank wouldn't kill sheep.

Down the road at the next farmhouse came the hail of Mr. Taylor across the night. The boy caught hold of his father's forefinger and trotted beside the long legs. Behind, tail still waving with pleasure that a good neighbor should have stopped by and called them out to the road, trotted old Frank.

Marian Earle, the young mother, came down the steps to meet them, and went round the house with them to watch the unusual performance of chaining Frank to his kennel. The act was purely perfunctory. The chain itself was rusty from disuse. Some dogs, like some men, are above suspicion. Steve expressed the sentiments of them all.

"Might as well chain *me* up," he said.

Smiling, they told him good night, half apologetically, for he seemed a little hurt that they should have put this indignity upon him. When they looked back as they went round the house he had sat down gravely in front of his kennel, the chain lying on the ground behind him. Across the back yard from him was the lot and the big white barn. Off to the side rose the slender structure of the windmill, asleep now up there in the moonlight. Behind the barn extensive fields of new-plowed corn sloped off to the pasture of Mr. Taylor. It was toward this pasture he was looking when they last saw him, with pricked ears they were to remember that afterward. But now, undisturbed, they went on into the house, leaving the moonlit world to silence and to Frank.

How long he sat there, ears alert, they did not know. Night, the dramatic period of a dog's day, brings oblivion to civilized men. Only the old clock in the hall recorded the passing of hours in the sleeping house. Day dawned at last over the countryside. The rising sun shot its level rays across the yard, and looked in the open window of the white up-stairs bedroom, where a little bed sat beside a big one. Steve and Marian had almost finished dressing when hurried steps thumped up the stairs, and old Aunt Cindy the cook poked her broad black face and starting eyes in the door.

"Mr. Steve, dat dawg broke his chain las' night!"

Marian Earle turned from the dressing table; Steve came hurriedly in from the bathroom, his shaving brush in hand; little Tommy slipped out of bed, tousled-headed, wide-eyed.

"De plow hands say," she went on, "dat dar's a dead sheep down in Mr. Taylor's parsture!"

Hurriedly they finished dressing and went down-stairs, and out into the back yard. He came running to greet them, fine, handsome fellow that he was, his silken red coat glistening in the morning, his bushy tail wagging, in his upraised glowing eyes that perpetual welcome of a dog for those he loves. From his silver-studded collar dangled a broken fragment of chain. In front of the kennel the rest of the chain lay along the ground like a snake.

Earle looked down. Even in the eagerness of welcome there was an undoubted shade of anxiety in his setter's eyes. Steve turned to Marian.

"Did you hear anything last night?" he asked.

She looked up at him and shook her head.

"Papa," cried the boy, "I heard F'ank bark!"

But they paid no attention to him, for yonder through the dew-sparkling cornfields came Mr. Taylor, his bearded face grave; and Frank, who always ran to welcome his master's friends, was watching this approaching neighbor sternly, a queer, half-resentful look in his eyes. Mr. Taylor glanced quickly at the dog, then at mother and boy and cook.

"That's all right, John," said Earle. "What is it?"

"Steve, it's Frank that's killing sheep!"

Earle flushed quickly.

"Oh, I guess not, John!"

"But I saw him with the sheep in his mouth!"

At this terrible indictment that fell from Mr. Taylor's bearded lips the boy gasped and caught old Frank protectingly by the mane. Mr. Taylor went on, looking straight into Earle's eyes, like an honest man whose yeas, however regretful, are yea, and whose nays are nay.

"About one o'clock this morning I heard the bleating of sheep. I got my gun and ran to the pasture. Frank here had a sheep in his mouth. At sight of me he dropped it. I ordered him home, and he picked it up again. I had to run at him and threaten him. God knows I'm sorry, Steve, but I saw with my own eyes. The sheep was terribly mangled."

"Lordy, lordy!" cried old Aunt Cindy.

"He's just gone wild," Mr. Taylor went on. "They do that sometimes, the best of them. I guess they can't help it; but neither can we."

"Come here, Frank!" said Earle.

Humbly the setter went, panting now, and Tommy went with him, still holding grimly to the heavy red mane. In the midst of them all Earle stooped down. His strong fingers trembled as he opened the mouth, and his eyes narrowed as he examined the perfect white fangs. This was the final proof of guilt, agreed to by all men where sheep are raised. When he straightened up head and shoulders above them all, his face was pale under its tan.

"The wool's there," he said, "plenty of it. You did right to tell us, John. Frank will have to go."

"He won't!" screamed Tommy. "He won't! F'ank never killed no sheep! F'ank never killed no sheep! F'ank never—!"

With a cry of pity the mother was down on her knees beside him, and had gathered him, sobs and all, to her breast.

"Better take him in the house, Mother!" said Steve.

After that the summer morning activities went on as usual on the plantation of Steve Earle. The call of negro plow hands came in from the fields now quivering with heat. Up in the air the windmill whirled round and round. Out in the lot the concrete trough filled with cold gushing water. But the big white house, with the windows up stairs and down open to the breeze, was strangely silent. For old Frank, the trusting, the trusted, had gone wrong.



"Why don't you turn him loose, Joe? He'll go home," said the storekeeper

Wherever through the centuries men have raised sheep the law has been in effect the same: the dog that kills sheep must himself be killed, or sent away never to return to the scene of his depredations. And now at midday this ancient and inexorable law descended upon Steve Earle and his dog. Out in the big road blazing in the glare the rural policeman swung out of his saddle and started up the walk. Steve went toward him, a challenge in his eyes. Halfway to the house the two men met.

The policeman was a sunburned young fellow, and his face underneath his broad hat was flushed this morning with more than heat. Maybe he had had experience before with men and their dogs, for his hand trembled a bit when he reached in his pocket and pulled out a paper, and his eyes, too, were challenging.

"Here's a warrant, Mr. Earle."

Steve read it through.

"Who's responsible for this?" he demanded.

"Jim Burton. He swore it out. You know Jim lost six sheep night before last. Jim was at the station just now when John Taylor rode up. Everybody had heard what happened last night. The magistrate was in the store. Jim made John testify. The magistrate swore out the warrant on the spot."

Earle glanced quickly toward the house. The boy and dog when last he saw them were in the back yard. They might come round the house any time.

"We'll go on to the road," he said. "As for Jim Burton, I'll pay him for his sheep—he knows that."

But the policeman hesitated. He was plainly worried. He was young, and he had his sense of duty.

"Paying won't do, Mr. Earle. You see my orders there. You know your dog killed those sheep. Now I want to be decent about it; I ain't doin' it for fun, you understand that. I thought I would take him away—up the road—a mile or two."

A glint of cold steel came into Earle's narrowed eyes.

"No," he said quickly, "you won't do that!"

"I've got my orders, Mr. Earle."

"And I know the law, Fred; I'm allowed an alternative. I'll take the alternative: I'll send him away from this community."

"When?" asked the policeman eagerly.

"To-night."

"Can I tell 'em that?"

"Yes; on the eight o'clock train."

"I guess that'll be satisfactory, won't it?"

"It's obliged to be, Fred."

The policeman mopped his face and the inside of his hat brim. This was ticklish business, tampering with Steve Earle's dog. They had told him at the station it would be. "Steve Earle's the squarest man in the country," they had said, "but he thinks as much of his dog as he does of his kid." Out in the road he swung with the alacrity of a relieved man into his hot saddle. He was sure it would be all right, he said again.

As he rode off, Earle saw in his hip pocket the glitter of a pistol butt, and his mouth tightened. The evidence against his dog was as strong as evidence could be. He had known John Taylor all his life; it wasn't the first time a fine bird dog had turned sheep killer. But he wasn't going to have Frank killed. They had had too many hunts together. He was thinking of them as he turned away from the road—glorious hunts! And now he walked with head bowed. Old Frank's disgrace was his own.

Halfway to the house Marian met him. She had seen the policeman ride off, and knew what it [CONTINUED ON PAGE 30]

Do Your Letters Say What You Mean?

By W. C. Smith

FEW farmers like to write letters, especially business letters; and after I moved off of the farm to our little village and eventually became postmaster, I was daily called upon to write letters for my farmer friends. They ranged in character from an inquiry for a pure-bred bull to ordering children's underwear from a mail-order house, but the letter that seemed to give the most trouble was the one which offered or attempted to describe something offered for sale. I never objected to this small service—in fact, I was glad to help. But the fact that men, and young men too, who were engaged in the enormous business of farming, who hired men and were represented by thousands of dollars of invested capital, who were good breeders and feeders of live stock and were experts in soils, made such a lamentable effort at letter-writing, was sometimes a little sad—almost pathetic.

It detracted in no way from the sterling worth of these men. The simple fact is that until recent years there has been but little need for much knowledge of correct correspondence on the part of the farmer. He has always been compelled to take what the other fellow offered. He has been too busy to write letters, he has had little to sell that needed describing, and he paid little or no attention to correspondence. Every man who writes a business letter should observe certain things.

He should be direct without being stilted. A letter should be natural and not rambling. The day of "I take my pen in hand to let you know" is past, just as the letter that begins by saying, "Yours of May 10th at hand and contents carefully noted," etc., is passing, although the latter example may be found in the correspondence of many progressive business houses. It is sufficient to begin a letter and say what you wish to say without any wordy meanderings.

"MR. JOHN JONES:

"DEAR SIR:—I have two heifers that from your description I believe will suit you," etc., is just as complete and much more businesslike than "I have your letter concerning the two heifers at hand and contents noted, and will say in reply," and so on through a half hundred words. Mr. Jones wants to know about the heifers he wrote about. He cares nothing about what you did or are doing to his letter. He knows that you have received it and noted contents, else you would not be answering his inquiry.

The letter that eliminates useless words is a great saver of time and paper. Business houses are short on both. In ordering from mail-order concerns, always use the regular order form that is usually mailed with or enclosed in the catalogue. It contains all the necessary information if properly filled out, and a letter is unnecessary unless special information is desired.

Men with something to sell, farmers with pure-bred cattle, hogs, or other live stock, I found to be the most lost correspondents. The tendency seems either to make the article in question too perfect or to depreciate it, with the balance in favor of the former. Men whom I knew to be absolutely honorable, who would not wilfully misrepresent anything in a sale for worlds, would go wild when they tried to describe it on paper. If they sent out this description while it was "hot," they regretted it later. If they left it for a rereading, they sometimes went to the other extreme and left out most of the good points. One of my patrons used to do a considerable business in cattle. He would come in and tell me all about the particular animal he had for sale, and then have me write to a prospective buyer for him.

"That sounds all right," he would say. "That is just the way it is, but I'll be doggoned if I can make it sound right when I try to write it out."

He could not write as he talked. That is the trouble with many men with stuff to sell. It also affects the sales letters of many business men in other lines. The best writer of sales letters that I know says he holds an imaginary conversation with every prospective buyer, and then attempts to transfer it to paper.

There is a difference between writing a sales letter to a personal friend and one to an entire stranger. In the first case, a letter may be intimate, but in the latter case it can hardly be more intimate than your talk would be if the buyer came to your farm. If you were a breeder of Shorthorns and a man came to your herd for a Shorthorn, you would meet him with ease and talk without embarrassment or intimacy. If you can do that in a letter it will be a good one.

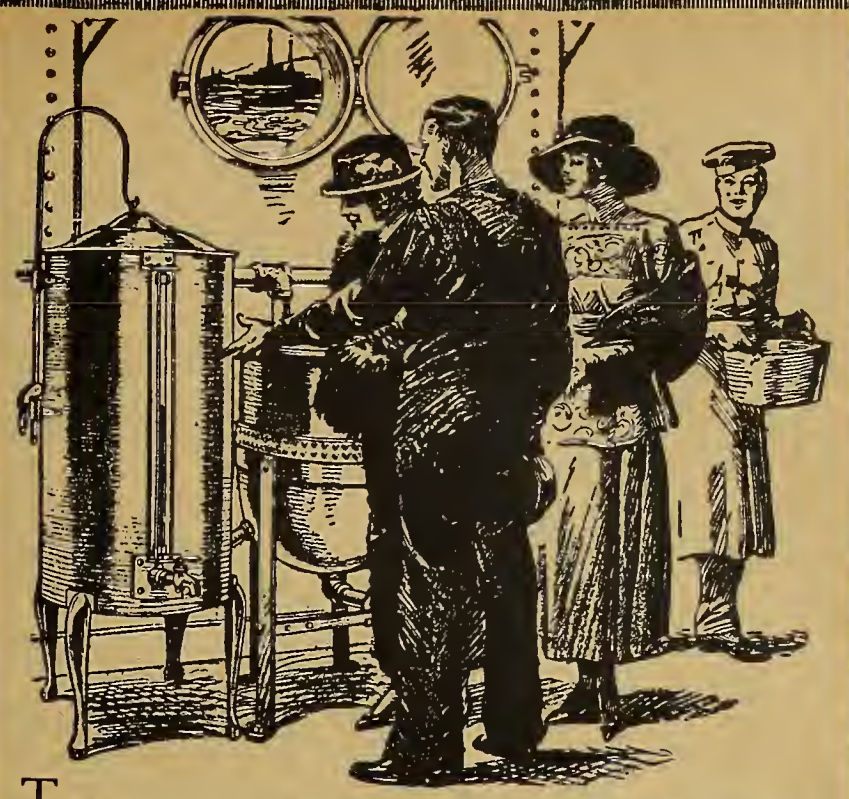
Then there is the letter of inquiry. No matter whether you write concerning a farm, a cockerel, or a flock of sheep, carry the same directness that a sales letter carries. Furthermore, do not describe an ideal and expect to buy it at bargain prices. There used to be a lady who wrote to me every year for cockerels to head her poultry flock. She always filled a letter-size sheet of paper, and invariably wanted two cockerels for $5. If I could have filled her order for the sort of bird she described I should have considered myself a marvel among marvels. In ten years of breeding one variety of chickens I never came up to the ideal that woman set for her $2.50 bird.

Proper stationery helps the appearance of the farm correspondence. Letter-size paper, either ruled or unruled, is best because the entire letter can be made on one sheet. It is 8½x11 inches, and the most commonly used size for a typewriter. One of these machines makes your business letter readable and more businesslike. If there is a youngster who will learn to operate a typewriter, and if you do any considerable correspondence, the $25 or $30 invested in a good second-hand or rebuilt machine will be worth while. The ordinary business-size envelopes, called No. 5 by your postmaster, are the most convenient. You can get these with your name and address printed in the upper left-hand corner from the Post Office Department through your local postmaster at the bare cost of production.

Well, What Do You Think of Us Now?

ON PAGE 40 of the February issue we asked you what was on your mind about FARM AND FIRESIDE—whether you liked us or didn't, and if you liked us for some things and not for others to please write and tell us so. We told you FARM AND FIRESIDE was your magazine, and that we wanted your suggestions as to how we could make it helpful, interesting, and practical for *real* farming folks, and for *all* farming folks who are in the farming business *as a business*, and as a means of getting the most out of life. You told us, in no uncertain terms. We have worked hard in the six months that have passed since then to put your suggestions into effect. We want you to write again and tell us what you think we have accomplished. Write this time, you who didn't write before. Are we on the right track? Are we printing things that interest and help you? Do you think there are still some weak spots? And what are they? Don't be afraid to speak your mind. We're not touchy. If you like us, say so; and particularly if you don't like us, say so, and say *why*. Only by pulling together can we folks get out a FARM AND FIRESIDE that we will all enjoy and get some benefit from. Meantime, good luck to you.

GEORGE MARTIN, Editor.



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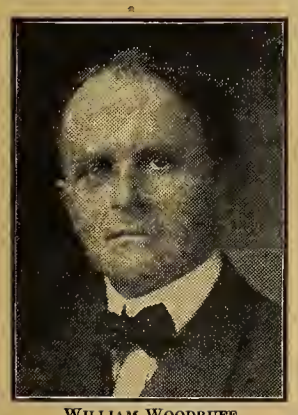
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The Sheep Killer

[CONTINUED FROM PAGE 28]

meant. Tommy and Frank were still in the back yard, she said. Frank wouldn't leave the boy—he knew something was wrong.

"What are we going to do, Steve?" she asked.

"Send him to New York to Lancaster. He can't kill any sheep on Broadway."

He said this a little grimly, but after he had telephoned the message to the station he came back out on the porch; he sank into a chair like a tired man, and looked off across the shaded lawn.

"Funny," he said, "how a dog gets hold of a man." He cleared his throat. "Mother, you'll have to tell the boy. I can't."

She told the boy that afternoon right after his nap—told him that his friend and comrade was going away. Frank would have a good home, she said. Didn't he remember Mr. Lancaster who came down last winter and hunted? Mr. Lancaster would be kind to Frank. If Frank stayed here, the policeman would kill him. He must go out in the yard now and play. He must be a brave boy and show Frank a good time.

He sobbed a little, his face buried in her lap. Then he went out in the yard with a big red apple she had given him as a peace offering. He divided it with Frank, who was waiting for him. Then he went soberly round the house and sat down on the high kitchen steps, Frank at his feet, and looked off brooding at the summer sky, very lofty and blue, with white masses of clouds drifting across, while above them the windmill squeaked as it turned its whirling face this way and that to the wind.

But it was one thing to be brave, and it was another thing to know that Frank was going away and was never coming back. A sudden lump too big for him would rise in his throat; he would get up, face crimson, and run into the house, crying out that Frank didn't kill any sheep; then he would come out again, another apple in his hand, but the revolt growing in his blue eyes. So the long, hot, brooding afternoon passed; the time for Frank's exile drew near; and just as the sun dropped over distant hills Tommy Earle played his last card.

But it all did no good; law is law for man and boy and dog. Somebody saw him, maybe the argus-eyed old Aunt Cindy, who was getting supper in the kitchen—saw him running away with Frank across the orchard to the shelter of the darkening woods beyond. Here came his father after them; yonder hurried his mother, her white skirts shining against the tall grass; old Aunt Cindy, out of breath, was coming too. The world was arrayed against him and Frank. At the edge of the orchard he turned to face them, a sturdy, futile little figure at bay, the glow of the sunset on his face.

"F'ank never killed no sheep!" he screamed.

He was carried back to the yard in his father's arms, sobbing with rage and sorrow and all the revolt of a small boy's soul. And behind, head down, tail depressed, followed old Frank. This had been the strangest day of his life.

BUT yet stranger things were to happen before another sun set over those distant purple hills, or another moon rose down the avenue of oaks that led to the road. Out of the house where he had carried the boy, and where Mother and cook had followed, came Earle alone, his face grim in the dusk, went into the garage and drove the car out.

"Come on, Frank!" he said.

Ears drooped, tail tucked but wagging, he went. But before he jumped into the car his mistress had run out of the house and to him, and had caught his head between both of her hands, and looked straight into his eyes.

"I don't believe it, either!" she whispered. "Good-by, Frank!"

Upright on the front seat beside Earle—how many times had he sat here!—he was driven to Breton Station, four miles away. The agent came out and fastened a tag to his collar. A while they waited in silence, then around the curve to the south swung a powerful light and bore down upon them.

Just a look up into his master's face as this light shone blindingly upon it, just a little hug as he reared up on his master, heart pounding, upraised eyes eloquent with trouble, and Earle had lifted him from the ground, a man in a lighted car piled with trunks had taken him and chained him to a slatted wall, from outside came a great and ever-increasing roaring, and old Frank's exile had begun.

All night long it continued, while the baggageman worked on his books, or dozed in a chair, and old Frank lay at the end of his chain, the lights along the roof shining into his eyes. Now and then, through sleepless hours, there came into his brain images of home—of master, of mistress, of boy; then of a moonlit pasture and an angry neighbor rushing at him with a gun; then of the strange day that had ended still more strangely. Not once did he bark or whine: he was a dignified, self-contained fellow; he was no boor even if he was a countryman. But all night long the trouble deepened in his agate-brown, melancholy-touched eyes, and in his dog's heart grew a vast loneliness and dread.

DAY dawned at last in that whirling country out there, and another sun rose over strange, misty, ever-rushing fields, and over towns that flashed past. Yawning, the half-awake baggageman brought him something to eat. From where he lay he looked up courteously at the man, he tapped the floor with his tail, but he would not eat.

It was bright day, but the sun did not shine in that vast rumbling place where they stopped at last, where all trunks were tumbled off, and where a voice he seemed to know spoke to the baggageman.

"Got an Irish setter in there?"

"Yes."

"Here's an order. Let's have him quick."

He was down on the ground in the midst of the hurry and confusion, of strange, intent faces and continuous noises, of hollow rumbling sounds and shuffling feet. A tall, ruddy, white-mustached man held his chain, smiled down at him, called him by name—Lancaster, his master's friend!

"We'll have to hurry, old man," said Lancaster. "Something queer about this."

Panting, he followed through the throngs that filled this bewildering world. He saw men and women stop and look at him. A uniformed man fastened another tag to his collar. They came out between two long lines of shining coaches. Another baggageman up in a door called to Lancaster.

"That dog for me?"

"Yes."

"Let's have him. We're late now."

Lancaster lifted him from the ground. Again a baggageman chained him to the wall. And once more through long hours old Frank, pawn of men and their devices, listened to the roar and glimpsed fields and woods and rivers, villages and towns and cities, whirling endlessly past.

All day long it went on. Every instinct was bewildered now. To what ends of the world was he being hurled through nights and days? It was late afternoon when against a dashing rain storm the baggageman closed the door. It was night and the lights on along the roof when he reopened it, and from that roaring outer blackness there came to the dog's quivering nose the smell of wet pines, of rain-soaked fields.

He sprang suddenly to his feet, his eyes wild with hope. The baggageman was coming to him, had unfastened the chain, stood with him in the door. Over that gliding country the moon was now shining. Across those moving fields that seemed to rush backward stretched a silent black horizon of forest. The roar was decreasing, the bell was ringing, yonder was a light. Here was a squat-roof station, with water barrels under the eaves. They had stopped. Ahead, the engine was panting and hissing. He began to plunge at his chain with the terrible fear that they would leave this place. That surprised-faced man hurrying toward them was the agent of Breton Station. That was Bolton's store where the light shone. That was the road beside it that led home.

He was on the ground now. He was looking all around him with shining, eager eyes. But there was no one here to meet him; and in the face of the agent who held the chain, and in the faces of those other men he knew who came across from the store, was no friendliness, no welcome. They crowded about, looking down at him with disapproving eyes.

"Oh, come in, dog!" said the agent, and jerked the chain. "How in thunder did you get here to-night? Steve wasn't looking for you till to-morrow."

"What the devil made Steve send for him?" demanded one of the men.

"It wasn't Steve," laughed another. "It was that kid of his."

The storekeeper began to talk. The boy and his mother had driven to the station that morning in the car. Right out there in front of the store Sam Raines, his face as long as if he had lost his wife, had told them *he* had some sheep killed *last night*—while the dog was on his way to New York!

"But that don't prove anything," broke in one of the men, "except there's two sheep killers in the community now instead of one. Didn't John Taylor see this dog do it? Didn't Steve Earle himself admit that there was wool in his teeth?"

"That's what I told 'em," said the agent, "but they wouldn't listen. One was about as excited as the other. They called up the house, but couldn't find Steve. Then the mother wrote off the telegram to Mr. Lancaster. 'Send him back at once,' she said. Evidence don't have much effect on women and kids. Come in, dog! I reckon if the rest of you fellers had seen that kid's face you'd have telegraphed yourself."

"Oh, well," said the storekeeper, lighting his pipe, "it just means more money for the express company. Steve'll send him back. Why don't you turn him loose, Joe? He'll go home."

"Unless he meets up with that pal of his," laughed a man—"that other sheep killer."

The agent hesitated, but the others crowded about. For half a mile to the woods the road lay straight and open under the moonlight. Steve Earle's setter was noted for his speed. Here was sport—like tying a can to his tail.

"Turn him loose, Joe!"

"You ain't man enough to hold him much longer!"

"Look at his eyes—green!"

The easy-going agent grinned.

"Have to trust some things to luck," he said. He stooped, and unfastened the chain.

"Go home!" he shouted, and waved his arms.

Behind old Frank the outlaw heard for a moment their shouts and laughter, and his eyes brightened with the sport of the thing. Then everything was silent but his own panting breaths and the light, swift splash in the muddy road of his eager, home-going feet. There would be welcome on the porch; there would be supper in the kitchen. Ahead of him raced the moon; he barked at it sharp and quick.

But he was coming home this night not to peace but to war. Within sight of home, serene and white amidst its trees on the next hill, just where the road crosses the bottoms that separate the Earle farm from the farm of John Taylor, he stopped so abruptly that his claws slid along the road. Even as he ran there had come to his nose, forever on the alert, the smell of a dog, and to his ears, keener than any human ears, the pounding on the earth of scampering little hoofs, the confused distant bleatings of terrified and helpless sheep.

HE STOOD panting, then choking, then panting again. He had heard that rush before, and he knew what it meant. Like a rush of distant wind came again the pounding of little hoofs, the cries of terror, the sounds and scents of violence, down in that peaceful pasture behind his master's barn. His eyes in the moonlight gleamed bright and fierce. He started to rush down there. Then he remembered that other night, he remembered the angry neighbor with his gun, and in sudden bewilderment he glanced toward the house.

In all the windows up stairs and down was no light, and on the whole place was no sound of stirring. They must be asleep as they had been that other night. But even as he hesitated there came the faint murmur of voices on the porch, then the tiny glow of a match that flared up and died down. His master was lighting his pipe! His people were still awake!

Maybe they had heard him bark, maybe they had seen him standing in the road, for as he rushed up the avenue here they came running down the steps bare-headed to meet him. Mistress and boy cried out to him with welcoming voices, but this was work for men and dogs. There was one face he saw, one face alone, and that face was his master's. Straight to him he ran with upraised shining eyes, then wheeled, rushed away toward the barn, then ran back to his master once more.

"Go with him, Papa!" screamed Tommy.

"One minute! Keep him with you!" said Steve.

He ran up the [CONTINUED ON PAGE 40]

What One Farm Woman Thinks of Our Better Babies Bureau

By Helen L. Crawford



THEY'RE coming—those letters from mothers-in-waiting who want to know how to take care of themselves and how to prepare for the little life to come—those letters from mothers-elect who want to know how to dress their tiny babies, how to bathe them, and how to perform the myriad other duties that pertain to babies. And they are calling for Mrs. Benton's helpful and inspiring letters, and for the leaflets with suggestions of what to feed the baby, how to tell if he is growing as he should, and so on.

They are coming from all over the country—from the north, the south, the east, and the west. They prove what we have always believed—that every parent wants to give his child the best start in life that it is in his power to give.

If you have a baby or are expecting one, why not let Mrs. Benton help you take care of yourself and of the little one?

Just this morning we received a letter that made us feel better than any that has come to us for a long time. It told us what one of our readers, who is already acquainted with Mrs. Benton's Better Babies work, thinks of it. It told us what she thinks of our putting Mrs. Benton's Better Babies Bureau at your service, and it cheered us a lot to know that she had the same idea of that Bureau that we have. She is a farmer's wife.



Some Idaho daisies

The letter reads:

"DEAR EDITOR: Your paper came yesterday, and I surely want to congratulate you on securing Mrs. Caroline French Benton and her Better Babies Bureau. They surely are better babies, for I have two of the dearest baby girls that speak highly for the great work that she is doing.

"Our older little girl is two and a half years old. We owe her life to these letters. She was brought into the world two months too soon, caused by my nursing her "daddy" through a serious illness. Our doctor, who is a child specialist, says it's a miracle. But now she is a strong little rosy-cheeked girl, for which we can never give thanks enough.

"Our baby, just two months old, is all a model baby should or could be.

"I'm writing this letter to let other mothers—country mothers—know that these things are possible for busy farmers' wives. We live on a 200-acre farm, and I do all of my own work with the help of an adoring daddy and some modern machinery—the vacuum cleaner, power washer, and garden plow instead of a hoe. These are only a few, and are within reach of us all.

"At baby's birth I rest one month before and one month afterward if at all possible, with a complete change of scene. During this time baby's daddy and the hired man 'bach'. Try it—they appreciate it more when you return.

"Our babies are out-of-door babies. This is accomplished by a modern screened-in bed and play coop. It, as well as the Bureau letters, is certainly a boon to busy mothers.

"My husband says I never know when to quit on this subject, but if I could only help the thousands of other mothers, especially farmers' wives, to make their burden lighter and a joy, which it really is, I would run on like the brook, 'Chatter, chatter, all the way.' May the good work never cease.

"From some of the Crowell children."

H. B. K., Illinois.

HERE is a letter from another mother of a Better Baby, saying in short, "Them's my sentiments too":

"I want to tell you how much I enjoyed your monthly letters before my baby came.

"And what a wonderful, wonderful help they have been! How I wish every young mother-to-be might write you and receive these letters. They have saved me countless worries and anxieties in telling me exactly what I should need and what I should do.

"We neglected sending the card after the baby's birth, so am enclosing it.

"Also, I am sending 50 cents for membership in the Mothers' Club. My baby is six weeks old.

"Thank you again for the help you have given me, and for the letters that are to come." *Mrs. I. B., Missouri.*

What the Better Babies Bureau Is

And how to secure its help

THE EXPECTANT MOTHERS' CIRCLE: Any woman eligible may become a member, receiving each month a letter of advice on the care of herself and the preparation for her baby. Several practical little pamphlet circulars showing designs for maternity dresses and a common-sense layette are some of the helps sent with the letters. No matter at what period you enter, everything from the first month will be sent. No mention of the Better Babies Bureau is made on the envelopes in which the material is mailed. Enclose a self-addressed envelope with *Fifty Cents* in stamps, for postage, *and state what month you expect your baby.*

THE MOTHERS' CLUB: Every mother of young children is eligible. Pamphlets, together with monthly letters of instruction on the care and feeding of babies *under one year of age* (covering such subjects as colic, constipation, weaning, teething, etc.), will be sent to any mother who sends *Fifty Cents* in stamps and states the age of her baby. There are also leaflets giving diet lists, and other helps for babies from one year of age to three years. This literature is all included in the Mothers' Club's monthly service, but if the letters are not desired the additional literature will be sent for *Ten Cents*. A self-addressed stamped envelope will bring a prompt reply to every inquiry. Address all inquiries to

BETTER BABIES BUREAU

or to Mrs. Caroline French Benton, Counselor

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He proved that Colgate's contained eight times more boric acid than any of the others—besides two ingredients described by the U. S. Dispensatory as soothing and healing. These ingredients were not found in any other powder examined.

Three years ago Dr. Breneman repeated the test, with the same brands. The result was almost the same—the only difference being that one of the other talcs had a somewhat increased amount of boric acid.

With Colgate's you are sure of the safe antiseptic action of the right amount of boric acid—as well as of superior fineness and absorbent action.

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No. 5 Talcum powder contains .40% of boric acid
No. 6 Talcum powder contains no boric acid
* Just the right amount



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Gift No. 762

Stem wind and stem set. White enameled dial, polished nickel case. Good looking and keeps fine time.

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You can do it if you want to, but you've got to get busy right away, because the watches are going like hot cakes. Boys certainly know a good thing when they see it. A lot of fellows won them in less than a week. They say it's a cinch.

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Not by a long shot, you'll say. Well, here's how to get the watch. Get eight one-year subscriptions to FARM AND FIRESIDE at twenty-five cents each, send us the two dollars, and we'll send you a watch by return mail. Just take a copy of FARM AND FIRESIDE with you and show it to your neighbors. Tell them it costs only about two cents a month. It won't take them long to see it's worth a whole lot more. If you don't understand send us the coupon right away and we'll give more information. Address:

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With that long-lived EVEREADY DAYLO *Tungsten Battery*

613

How You Can Increase Your Wheat Yield

[CONTINUED FROM PAGE 12]

complete fertilizer, made up of about 200 pounds steamed bone meal, 100 pounds acid phosphate, and 40 pounds muriate of potash in the fall, followed by 60 pounds nitrate of soda in the spring, or a total of 400 pounds per acre, having the formula 4–16–5, and costing about $6.50 per acre for the materials, or at the rate of $32.50 per ton.

"Allowing $5 for handling the manure, $3 for the phosphate used with it, $3 for the limestone, and $6.50 for the fertilizer, the total cost of this treatment has been $17.50 per acre for each four-year period, or $4.38 annually.

"The outcome of this treatment has been an eight-year average of 77 bushels of corn per acre, followed by 61 bushels of oats, 33 bushels of wheat, and 3⅔ tons of hay, thus giving an increase above the unfertilized yield of 50 bushels of corn, 31 bushels of oats, and 21 bushels of wheat, and more than three times as much hay as has been harvested from either of the hay crops on the untreated land."

This plan of using fertilizers can be put into practice to advantage in the greater part of the winte -wheat region. Of course, not all the land in the Wheat Belt is in condition to produce such yields, but it is certain that the response which will be given by soils to certain parts of the treatment above described will be sufficient to show that the yields on the majority of farms may be increased.

In this discussion of the vast problem of winter-wheat culture one is naturally circumscribed by the necessity of brevity. I have tried to answer the more important points raised by J. F. M.'s letter.

God Helps Those Who Help Themselves, and This Includes Farmers

SOME men leave millions of tons of limestone buried in the hills around them when a little of it crushed and applied to their farms would sweeten their soil and make it productive. (See "Alfalfa Joe" Wing's article elsewhere in this issue.) And other men leave thousands of helpful things buried in their state experiment stations when a little of the free information available there would help them make more money farming.

If you want to use your state experiment station and don't know where it is, look it up and write to it for what you want. The man in charge will send you a list of bulletins already issued, and you can order from that (free) the ones you want. He will also put you on the list for future bulletins on the subjects you tell him you are interested in, and a monthly bulletin on experiments, crop reports, etc. And he will give you reports on diseased plant samples, pests, etc., which you send them. In special cases they will send a man to your farm to help you solve your problem.

If you want bulletins from other States, write to the experiment station in that State and they will send them to you. The Department of Agriculture at Washington will also give you the same service. If you don't know where your station is, ask us and we will tell you.

THE EDITOR.

Why It Pays to Disk the Stubble Land

By R. B. Rushing (Illinois)

IT WILL pay to disk stubble land that is to be plowed later, just as soon as the shocks are removed. This disking will conserve moisture, and make it possible to plow this land long after similar undisked land is too dry to plow. It will also kill insects and destroy their eggs, and this effect is especially important where insects have been a great pest. One can disk the stubble land rapidly, and can make good wages in doing it.

The early preparation of a seed-bed for wheat or for alfalfa is especially important. In tests on the seed-bed preparation for wheat the best results were obtained by deep plowing early in July, and the profits steadily decreased as the plowing time was advanced. It frequently happens that a drought comes in July and stops the plowing at just the time it should be done, and it is then necessary to wait until the rains come later in the fall, which is frequently as late as September. It is very rare that the weather conditions are such that a good seed-bed can be made on September plowed land.

When the stubble is disked, a loose mulch is formed that retards the evaporation of moisture very materially, and also allows the capillary connection between the plowed land and the subsoil to be restored much more quickly after plowing than on undisked land. The disking mixes the trash and stubble with the soil, and it is an easy matter for the plowed land to form a union with the soil that is not stirred. And it is absolutely essential that the capillary connection be restored in good shape before the wheat is planted.

Soil that does not have a mulch will crack when it gets dry, and these cracks are the lines on which the clods are formed. A mulch on the surface will prevent this clod formation, and the labor of seed-bed preparation after the plowing will be less. Dry, cloddy soil is a hard proposition when it comes to making a proper seed-bed. As a contrast with this, take land that has a good surface mulch before it is plowed. There are but few clods in this case, the soil is mellow and loose, and it is easy to prepare the field in ideal shape to receive the seed.

If you wish to see how capillary attraction works in pumping the water out of the soil, take a cube of sugar and dip a corner of it in your coffee and see how quickly the liquid climbs up. It is being moved by capillary action. If you put some loose sugar on top, you will see that the coffee does not climb up through it so quickly. The reason is that the grains are so far apart that capillarity has been destroyed; the grains are not in a condition so the liquid can be raised. Soil grains are placed in a somewhat similar condition when the surface is disked, and the evaporation of the much-needed soil moisture is checked.

When one considers the great amount of moisture necessary to mature a crop properly, it is easy to understand the great need for conserving the supply. It takes more than 500 pounds of water to make every pound of dry matter found in the oats plant, and it takes about 400 pounds with wheat. A little less, or sometimes as little as 300 pounds, will do for corn. Unless great attention is given to storing the rainfall in the soil, and putting the land in condition so it is not lost by capillary action, there is apt to be a deficiency at just the time it is most needed.

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Flowers That Will Make You Glad Next Spring

By Andrew S. Wing

THERE are few people who do not love flowers, and a country home above all is not a real home without them. But, no matter how many you plant, your flower garden is not complete without some of the old-fashioned hardy perennials. They are easier to grow than most people think, and, once established, they will thrive and increase, giving you more bloom year after year without the trouble of yearly planting. Indeed, some of the loveliest farm gardens I have ever seen consisted almost entirely of perennials, so selected and arranged as to give almost continuous bloom from early spring until nipped by late-fall frosts.

One drawback to perennials is that they do not bloom the first year, but this can be overcome by planting the seed in the late summer or fall. They then get a start during the autumn months, and will bloom the following year. Among those grown from seed which should be in every farm garden are foxglove, larkspur, and Canterbury bell.



Photos by Nathan R. Graves

The changing variety of the perennial flower garden will delight you from early spring until late autumn!

Select a rather sheltered and out-of-the-way place for the seed bed, because they may be transplanted the following spring to their permanent places, and they are more apt to thrive if a special spot is selected for their early growth. Have a well-enriched, mellow soil, and work it up into a fine seed bed. Great care should be taken not to plant too deep or the tiny seedlings will not be able to make their way to the surface after germination. This is of great importance. Keep the plants well watered, and do not allow the weeds to get a start. Watch out that the chickens do not get into them. Brush or chicken wire will prevent this. It is well to mulch them too, before winter sets in, with a light coating of straw. A little manure with this will also help, but care must be taken that they are not smothered out by too heavy a covering.

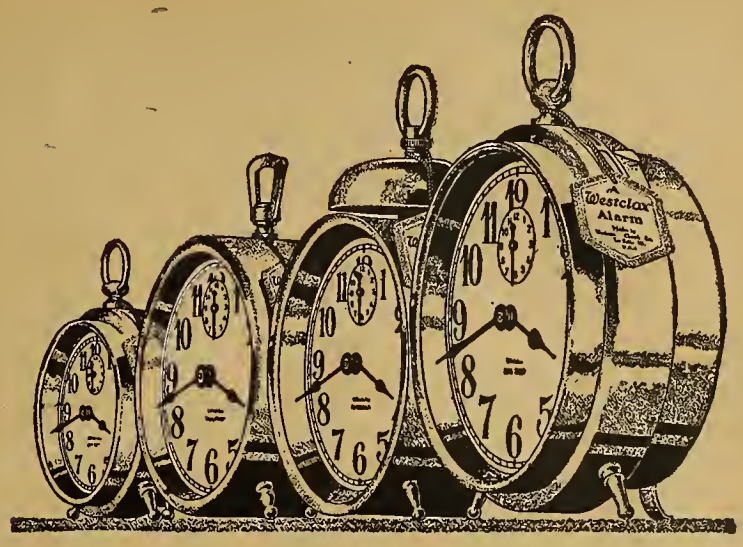
I must confess that, while I love most all flowers, the perennials are most charming to me. Annuals are too much trouble for the average gardener who does not have a great deal of time to spend with his flowers. I like to watch my perennials grow and multiply, and then after them I go with a sharp spade and divide them up into two or three clumps, and set the new plants thus created in new places. I like to try new combinations of color and variety. This division can be profitably done in the fall with a good many perennials. With some it is better to wait until spring. If divided in the fall they should be carefully replanted and mulched so that the frost will not heave them out of the ground. Peonies are much better divided in the fall.

I wonder how many people with the old-fashioned "pinies" in their yards ever thought of dividing them up? Some of the old clumps have been blooming for years, and would be greatly benefited by division and a supply of fresh soil, to say nothing of the additional plants which would be obtained. German iris, the common "flag" of the garden, is greatly benefited by division and replanting every few years. If left alone it tends to grow out of the ground and become ragged. The lovely Siberian iris is also easily divided, and so are the wonderful varieties of Japanese iris.

Hardy phlox spreads rapidly, and is benefited by occasional division. In fact, there are few of the perennial flowers which do not multiply by root-stalk division, or by splitting up of the tubers in the case of the tuberous-rooted plants.

As I said before, this division can be done in the fall; but, whether it is done in the fall or spring, it should be done while the plant is dormant or immediately after growth starts, as otherwise injury will result. By spending a little time each year dividing up the largest lumps, you can soon have as many perennials as you want. First, however, be sure that they are worthy of propagation. There are hundreds of lovely peony varieties, and do not become prejudiced against them because you do not happen to care for the common kinds. No peony is ugly, but some are much handsomer than others. The same applies to the iris family. If you do not like the common yellow or purple "flags," pay a visit to some nursery and pick out some of the newer varieties, such as the Fan and Vilmorin seedlings, or select some from a catalogue that sound good from descriptions. If they seem a little high-priced, remember that every year that the plants do well you will have an increase of from two- to fourfold.

You have missed half the beauties of country living if you haven't an old-fashioned perennial garden to stroll through in the early mornings when everything is dew-covered, or when the evening sun begins to throw its long shadows across the lawn. In May you can have the dainty-tinted columbine, German iris, and bleeding heart. June will delight you with a continuation of the German iris, peonies, Canterbury bells, gaillardia, Scotch pinks, Japanese iris, Iceland and Oriental poppies, sweet-william, and yucca or Adam's needle. During July you can have hollyhocks, foxgloves, larkspur or delphinium, and helianthus or perennial sunflowers. In August there will be cardinal flowers, phlox, and golden glow. September brings the Japanese anemone, [CONTINUED ON PAGE 36]



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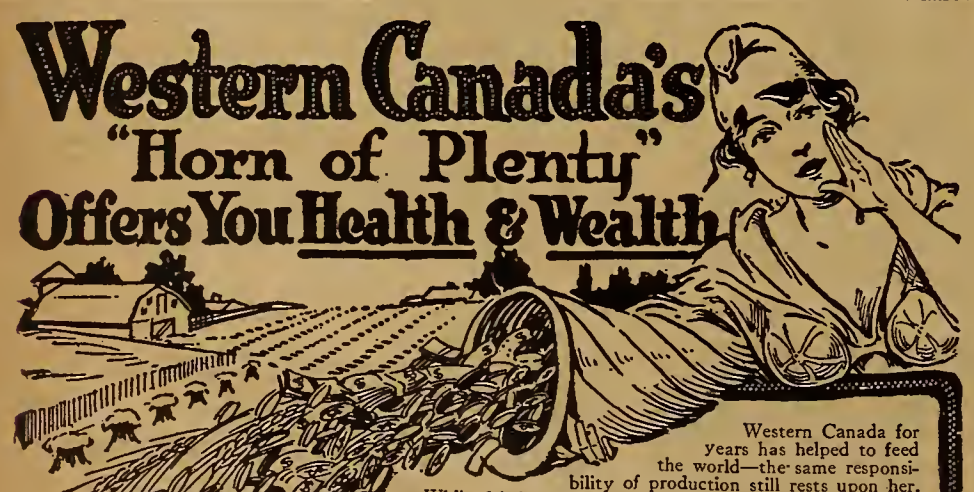
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or choice of 44 styles, colors and sizes in the famous Ranger line of bicycles for you to keep and use a month as your own, **Would You** then agree to show your bicycle to ten or more of your friends and tell them the ridiculously low factory price, easy terms, unusual conditions and exceptional offers I would make, all of which I will explain to you if within ten days of seeing this you will say in a letter or on a postal, *"Send particulars of Bicycle Offer"* and address your postal card or letter:

Personal for **G. L. LEWIS, Manager**
MEAD CYCLE CO. 83 Mead Block, Chicago

When You Buy a Motor Truck

[CONTINUED FROM PAGE 15]

COST AND RESULTS: The principal expenses, aside from the driver's time, are for gasoline, oil, tires, licenses, and repairs. For a ton truck the cost may be expected to average about 10 cents a mile. Depending on the owner's resourcefulness and mechanical skill, the cost of operation may be a few cents higher or lower than the figure mentioned. If the truck replaces horses, the owner will save principally in feed, and also cost of harness, shoeing, and veterinary service. The truck will require less care in the nature of chores and less space for housing when storage for feed is considered.

Additional advantages are: Saving of driver's time, due to greater speed of truck; wider radius of marketing; less shrinkage in hauling live stock; better market conditions of perishable products; stands safely without hitching, saving a lot of livery charges in city and ability to repeat trips as often as desired, whereas horses would need rest.

As I said a while ago, selecting a truck is an individual problem for you to solve. There is no place on the farm where you can use headwork to better advantage than in the matter of getting a truck. A truck is a good deal like a child: if you don't handle it to the best advantage it won't amount to nearly so much as it will if you study it and put it where it will do the most good. Here is what I mean:

I happen to know two neighbors, both good farmers. A few years ago one of them, anxious to get a local milk-hauling contract, bought a ton truck. He obtained the contract, which guaranteed $70 a month, and which provided a schedule of extra payment for hauling all cans in excess of a specified number. He also did miscellaneous hauling, and still had time to help his hired man with the farm work. The ton truck proved a valuable investment, but not so much so as his neighbor's half-ton outfit.

The farm was about a mile from an interurban station from which he formerly shipped produce to a large city, 20 miles distant. Under the new plan, with his half-ton truck, he hauled one load to the station and billed it to the city, consigning it to himself. Then he loaded up again and took that load to the city by truck, which traveled nearly at automobile speed. Having disposed of his load, he called at the city interurban freight station with his empty truck, marketed that load, purchased any supplies he needed—direct from the wholesaler in many cases—and returned home.

His investment in the light truck and the cost of operating it were both low, and by his personal knowledge of that particular market he sold at the best possible prices in addition to saving commission and city hauling charges.

In some of the fruit districts, where careful handling and speed in marketing are important, special motor-truck bodies have been developed along highly ingenious lines. One of the most successful is similar to that of a pie wagon such as bakers use. There are eight or ten shelves, one above the other, only, instead of being filled with pies, they are spaced to receive boxes or small baskets of berries, grapes, and similar products which cannot be handled in bulk without losing market value.

Double-decked motor-truck bodies are becoming common in localities where two important classes of products, such as live poultry and eggs, are marketed in large quantities. One product is carried above and the other below. In fact, the limit of utility is as distant as the limit of ingenuity, and even the moderate-sized truck has sufficient capacity to stimulate careful thought in body planning by everyone who has market problems.

More power, personally controlled, is a normal craving. We have developed the horse wonderfully compared with the prehistoric horse, no larger than a small dog. But even the best draft horses, though as strong as a dozen men, are now too small a power unit for hauling the crops as we have learned how to produce. The motor truck will not do the work of the railroads on the one hand, nor will it entirely supersede horses on the other: it will simply fill an intermediate position.

Motor power, wisely selected and used, is not a new thing, but just another labor-saving machine to make your farming of to-morrow less laborious, and give a few more hours for your own use.

Take Your Bed With You

By Frank C. Perkins (New York)

NEVER since the automobile itself has been perfected and brought within the reach of practically everyone has there appeared a device or attachment to be used with it that so greatly increases the pleasure and usefulness of the car as does the auto cot. Regardless of the nature of the trip or reason for making it, the fact that one remains away from home overnight with the car makes this simple and sensible cot desirable. It weighs less than 15 pounds, and can be placed in position for use in no time at all. When not in use it is folded up and placed in the tonneau, back of the front seat, where it is out of the way.

With the side curtains drawn one has as secluded and protected sleeping quarters as could be desired, and no comfort is sacrificed. Two cots fit any four, five, or seven passenger car. The front rests slide back or forward on the frame to fit any length of tonneau. When in place the cot rests on the backs of the seats without marring the leather, and is held in position by the curved rests that fit the curve of the upholstery. The cot extended is six feet long by two feet wide, made of one-half inch galvanized tubing, hinged in the middle and covered with heavy canvas. Two braces hold the frame rigid, the front one being higher to offset the difference in the height of the seat backs.



Breaking In a Car

By Earl Rogers (Ohio)

WHEN the most of us get a new machine we like to see what it will do. And in order to see we put it through stunts that would not be so bad after the machine is broken in, but for a new one they are hard tests. So many times I have heard this, "She went over every hill on the trip on high." That is a good record, but there are so many times when it is much better not to let a car do what it will. Most steep hills can be handled easier on second than on high, and every part of the machine will be saved a heavy strain.

It is great fun to drive a car through a stretch of mud on high when everything is working right. Every cylinder hits on time, and it pulls as evenly as one could wish, even though it seems as though every hit must be the last one the engine can make without stalling. But it is the hardest strain one can put on the entire mechanism, and even though no immediate damage appears, yet there are strains many times, and trouble started which will cost you dearly later.

When I first started driving I liked to "let 'er go." I had my first experience with a motorbike of a speed limit of 72 miles an hour, and though I never ran quite that, there was plenty of power to do it. I drove that machine for four years, while most of the boys who got machines were getting their second or third one by that time. It was my first machine, and I was afraid to drive fast at first, and so it was broken in at a slow pace. Then the first machine I drove was run at a slow pace for the same reason, and it is going yet. I started with it in 1915. The next car didn't matter so much, but last year another one, just six days out of the factory, was broken in under 20 miles an hour for 300 or 400 miles. I am sure that it has paid in spite of the temptation to "let 'er go" when it is new.

With the methods of manufacturing and testing used in most factories, there is very little running done by the average machine till you get it in your hands. You have to be the smoother and adjuster instead of having that done in the shop, as it used to be. Of course, increased efficiency in the plants makes less adjustment necessary than formerly.

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Who Praise The Essex

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Deliveries of new cars approximate a hundred a day.

Thousands, through demonstrations made by dealers and rides with friends, are daily learning the qualities that account for Essex popularity.

Their knowledge, like those who have not yet ridden in the Essex was limited to hearsay. But their impressions were most favorable because of what others had told them.

Won't You Too Join Its Army?

You too, will volunteer your endorsement, we are sure, if you will but ride in the Essex.

It has never failed. Our estimate is that more than half a million have ridden in it and are telling their friends about the Essex.

Such praise is not misplaced. We don't believe it greater than the car deserves. But that you will be able to judge after you have ridden in the Essex.

Points Others Speak Of

Note how motor car talk quickly turns to the Essex.

When light, cheap cars are spoken of their qualities are usually compared to the Essex. Then someone says, "But the Essex also has ————" and from then on Essex qualities are compared to large costly cars.

It isn't likely that anyone will say any light similarly priced car approaches the value of the Essex.

In performance, for instance you won't hear it classed with any but the most powerful.

And so with its riding qualities, which are invariably compared to high priced large cars.

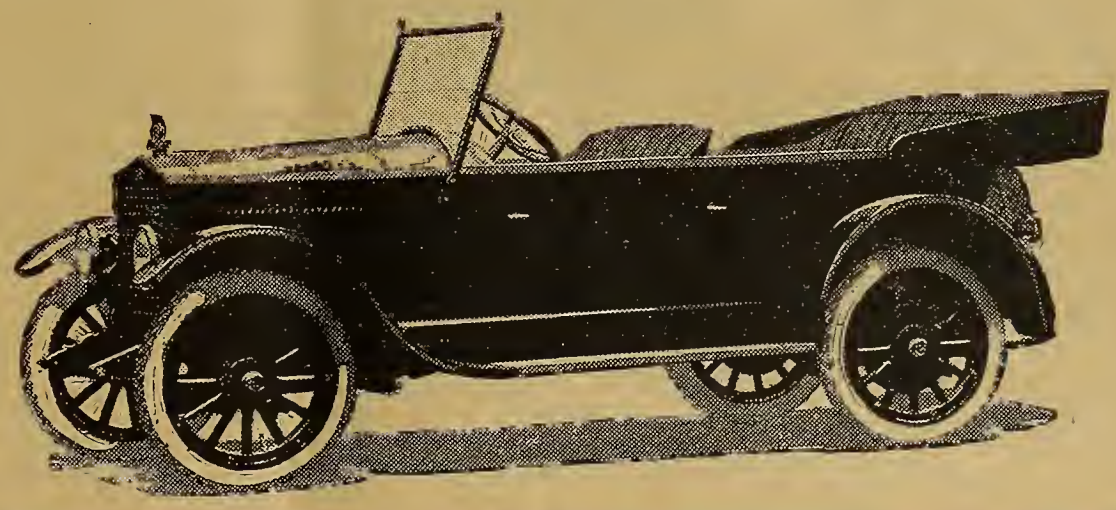
So is the detail of finish and beauty judged by such standards.

Comparison with other light weight moderate priced cars can be made only with their respective first and operating costs.

Can You Resist The Invitation?

We hope you won't delay in accepting our invitation to ride in the Essex.

The result, we think, will be your leaving an order to be filled as soon as possible. We know you will help spread the news about the Essex, for it must inspire you with the same admiration others voice for it.



(52)

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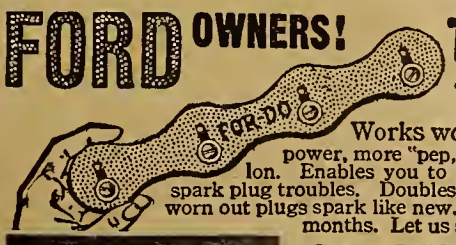
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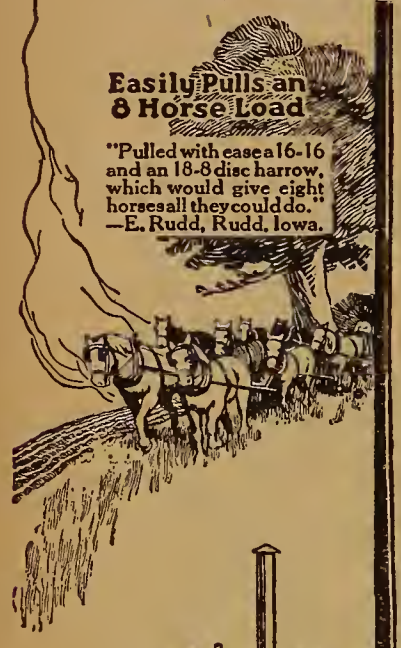
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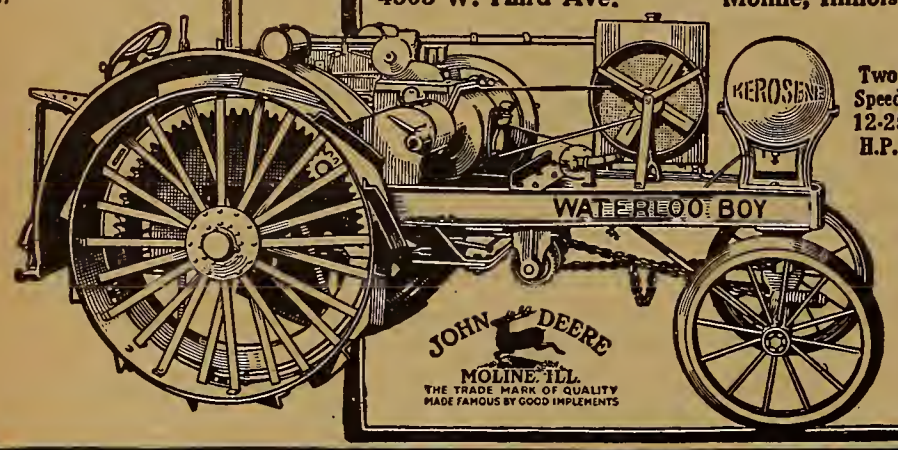
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JOHN DEERE
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Two Speed 12-25 H.P.

How Does Your Cream Test?

By Arvle Sowers (Illinois)

DOES your test ever vary? And what do you generally say when the variance isn't in your favor? Probably you lay the blame on the operator at the receiving station. Now, don't you—sometimes, anyway? Oh, I know how it is. I used to sell cream, and now I am operating a station.

I'll admit that the operator is sometimes to blame—but I'll explain some of his faults later. Butterfat is a very difficult farm product to deal in—that is, always to satisfy the customer. All operators know that; and nine to one, when your test drops off, he is tempted to raise it, hoping that you will have a better test next time. But the law doesn't stand for that.

for that is one of the operator's busiest days. Quite a few of my customers are avoiding the Saturday rush by bringing me their cream on Friday.

Another thing about the rushed-through test on a busy day is that the acid used to eat the whey from the butterfat takes effect at once. Consequently, in making at least four tests at once, the operator has to do some moving about to get the test bottles into the tester. It only requires five minutes for the acid to eat up the whey, and the tester is supposed to be in motion all that time. If one of those minutes passes before the tester gets in motion, part of your butterfat is eaten up by the acid, because the motion of the



Here, Buck! Have a Bite of My Apple!

JIMMY and Buck have been out in the orchard hunting ripe apples. While there they found a turtle, who was making a trip to a near-by pond, and Buck almost got stung when he stirred up a bumblebees' nest. They found the apples, though—some big red Astrachans—and brought them back in Jimmy's handkerchief.

Here they are resting up on the back porch after their explorations. Buck doesn't like apples very well, but he is too polite to refuse anything his pal offers him. He would rather have a nice piece of beefsteak, but anything that Jimmy likes is good enough for him.

So, what are we operators to do then? I wish you dairymen—everyone of you—would install a Babcock testing outfit. Then you would soon learn, by observation and experience, why your test often varies.

There are a dozen and one causes for your cream to vary in its test. We will assume that you have never touched the regulation screw, changed feed, nor has the engine failed to turn the separator at the proper speed. Moreover, we will take it for granted that you have kept the fresh cream thoroughly mixed with the sour.

Then, why does your test fall short? Well, the condition of your cows may have something to do with it. A cow doesn't give quite as rich milk when she isn't feeling very good. Cows have their off days. Then, too, a rainy spell will lower your test. Even if you are feeding the same feed, that doesn't prove it is always of the same quality.

Another thing: Don't allow your cream to become so thick in the winter months. It is impossible to mix thick cream thoroughly enough to give a fair test. The milk will naturally settle to the bottom of the container. Subsequently the thick cream on top will, in spots, become hardened and lumpy. A thorough mixing is out of the question. So loosen the regulation screw, whatever you do. It's better to have a lower but a fair test. Furthermore, cream that will test 55 per cent butterfat leaves at least 1 per cent of the butterfat in the skimmed milk. Therefore, cream testing from 35 to 40 per cent will in the end net you more money.

Now to the operator: Sometimes, especially when you rush him through with your test, he might get a little careless about the proper temperature. So don't try to hurry your operator through with your cream. Also remember that Saturday is a bad day to bring cream to market, tester gathers the butterfat on top in the test bottle. Then, too, if the hurried operator happens to get the tester filled above the neck with water at the first turn, some of the butterfat is prevented from coming to the top. Subsequently the acid gets it.

Flowers Will Make You Glad

[CONTINUED FROM PAGE 33]

tritoma or red-hot poker plant, hardy aster, and helenium. Your hardy chrysanthemums will last through October and until November's chill winds fade them.

Of course, variations will occur in blooming time according to latitude, and there are many charming flowers which can be added to the above list as experience grows. Do not try too many things at first, but select a few which you know, and which are more easily grown to start with. As your knack grows, increase your list every year by the addition of a few more choice varieties, and you will be surprised to see how soon your perennial garden grows to be a source of pleasure.

Start your old-fashioned garden this fall by planting a few perennials. Choose a sunny place, and plant in masses rather than by scattering your efforts all around the place. Against a wall or fence is a good place. Do not make the mistake of putting round beds in the middle of the lawn that will make trouble for the boys in mowing. But don't worry too much at first about arrangement and color combinations. Take good care that your soil is rich and well prepared. Get a start by planting a few varieties, and later the arrangement can be taken care of, as they are easily moved if the first location does not suit you.



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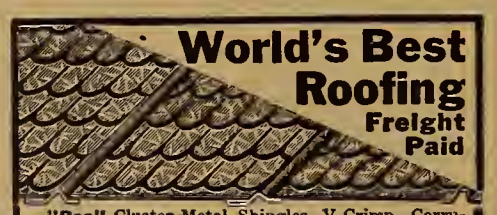
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What Sweet Clover Will Do For You

A FEW years ago sweet clover was considered a weed, a roadside pest. Now it is acknowledged one of the most valuable soiling crops, but there are still many farmers who do not fully appreciate how valuable it might be in their rotation.

All animals love sweet clover after they have learned to eat it, and a small acreage will help out very materially during the hot, dry summer months. I have seen a plot of a few acres in one end of a 30-acre pasture that practically supported half a dozen horses, as many cows, and a small flock of sheep during the months of August and September. And the pasture was a good blue grass one too, that was partly first creek bottom. When the blue grass became short the animals spent most of their time in the sweet clover, and even then hardly kept it down.

The above probably is an extreme case, but it shows what sweet clover will do under favorable circumstances. Hogs love it too, and will keep it cropped close to the ground if the acreage is not large. There is some danger, of course, of grazing too close, and this should be carefully avoided; but if the plant is kept down to a foot or less in height the animals will pick off the juicy leaves as they come out, and they are much more nourishing than the tall, hard, and woody stems and branches.

A small acreage of sweet clover, or Melilotus, will pay on every farm. It will furnish, I am convinced, more highly nutritious forage than any other plant we have, and will stand a great deal of abuse. Practically the only requisite in the way of soil is that it have lime in it. It will grow in places that are too wet for alfalfa and clover, and on gravelly hillsides that are too deficient in organic matter to grow anything else.

The white-flowered variety is the best, and it is desirable to have the seed scarified—that is, have your seedsman run it through a machine that will scratch off the hard seed coat and make germination more prompt and sure. Buy good seed and sow in a good, firm seed bed, at the rate of about 20 pounds to the acre. Summer or fall seeding is desirable, or it can be sown in early spring. If you have not had alfalfa or sweet clover on your field before, better inoculate with some soil from a neighbor's field, or with the commercial inoculation, which is absolutley sure if obtained from a reliable source.

Sweet clover is also fine for the bees. They love it, and will make more honey if sweet clover is close to hand. J. A. B.

The Pirate Barberry

DO YOU still have the common barberry on your farm? If so, you are providing a breeding place for the disease which destroys so much wheat every year—the black wheat rust. For several years a campaign to eradicate the common barberry has been in progress all over the country. Some States have passed laws making it illegal to grow it. Others are merely urging its eradication, but all are agreed that it must go.

Everyone is familiar with the life history of the common housefly. Even children are taught in grade schools how the eggs are laid in manure or refuse, and how the adult flies come from the maggots. It is a little harder to understand how a plant disease may have two hosts, but such is the case with the barberry. There are two distinct and separate stages in the life history of the black wheat-rust organism. One stage is spent on the leaves and stems of the common and purple barberry. It will only live on the barberry when in this stage. The spores are borne from the barberry to the wheat by the wind, which results in the destructive black rust on the stems and leaves of the growing wheat plant. Both the barberry plant and the wheat plant are necessary in order that the black rust may exist. That is, there will be no rust organisms on the barberry if there is no wheat in the vicinity, and there will be no rust on the wheat if there are no barberries near. The wind is capable of carrying rust several miles.

If you are in doubt as to whether you have the right kind of barberry or not, send samples to your experiment station for examination. The Japanese barberry is even a prettier shrub, makes a better hedge, and is good for planting around buildings, as it is lower growing and bushier. It has handsome red berries in winter, and is a fine place for the birds. This Japanese barberry is not attacked by the rust, and therefore should be used in your plantings to fill the places left by the grubbing out of the common and purple varieties.

Do not wait for a law to be passed making it compulsory to destroy your barberries. Thousands of bushels of wheat will be saved every year when this plant is entirely exterminated. Why not be a leader in your neighborhood in barberry eradication? W. A. S.

Eliminate the Scrub Sire

FEED is the biggest thing the ranchman has to contend with. One year of drought and he is in a hard way for feed for wintering his cattle. For this reason he has to keep the stuff a year longer to make it weigh anything near right.

W. C. Rogers of Pierce County, North Dakota, until four years ago, had the same trouble. Now he markets his cattle in three years, instead of four; and the stuff weighs from 50 to 100 pounds heavier. The reason is pure-bred bulls.

"Until four years ago I bred my own bulls," he said. "The sires were not pure-bred, and I had to keep my steers for four years before I could make them heavy enough to sell as beef on the market. Some of my friends in other States in the Northwest told me how they got the best results with pure-bred sires, so I bought a few.

"Now I wouldn't have anything else. I have a herd of 300 cows. The result of using pure-bred bulls was noticeable on the first crop of calves. Moreover, the heifer calves were much better than their dams, and the second crop showed more improvement.

"The stuff I am marketing now is three instead of four years of age, and the weight is from 50 to 100 pounds more than it used to be at a year older.

"I have thinned my herd so that nothing I have is of scrub breeding. The calves produced by the pure-bred bulls bring more on the marekt, too, for they are of better quality. They are thriftier, and can get along better than the scrub stuff."

He said his crop of calves was larger than before he used pure-bred sires.

The Way We Started Our Farm Bureau

[CONTINUED FROM PAGE 6]

on their legislative committees. This selection has been well done, and we now have a picked body of the best farmers in every county who can be depended on to act promptly and powerfully should the need arise.

Within the year a majority of the agricultural States will have their state organizations so perfected that a national federation of all the various States is assured. When this national federation is perfected and loyally supported, and with a strong executive board entrusted to study the needs of the American farmer, a movement will have been started which will assure the farmer a recognition in national affairs never before accorded. Then, for the first time, will the great industry of agriculture be on an equal basis with other branches of industry that have been organized for some time. This completed organization of agricultural interests is not undertaken with the selfish aim of preying on other branches of society. The individual units of agricultural production are so small that without union for mutual protection they have not a ghost of a show of getting a square deal from the completely organized bodies with which they have to deal.

The Farm Bureau movement is the first that seems big and broad enough to unite all of the many branches of agriculture into one great federation, powerful enough to stabilize this great basic industry. If it can do this, why can it not also combat successfully the wild anarchistic and Bolshevistic forces that have been trying to gnaw at the very vitals of civilization?

The Salisbury New Rear Axle



Pressed Steel Standard Type

"Always Safe"

AN automobile is only as good as its *rear axle*. Remember—you may have the best engine in the world in your car but that does not and cannot make it a *good motor car* unless the *rear axle* is mechanically correct and physically perfect.

Few people realize that the *rear axle* of an automobile is, next to the engine, the most important mechanical factor in producing a good automobile. The engine's power is transmitted to the rear (driving) wheels through the pinion gear of the propeller shaft and differential mechanism—all part of the *rear axle*.

The *rear axle* of a carriage or wagon carries the weight of the vehicle on the spindle. The *rear axle* of an automobile carries the weight of the vehicle on its *housing*—the pressed steel case which encloses the differential gear, driving shaft and all bearings—and includes the wheel hubs, brakes and brake mechanism complete ready for use.

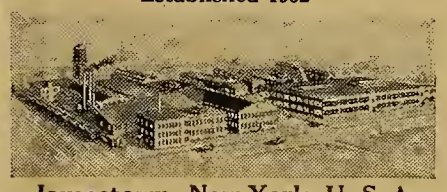
One may better understand the importance of the *rear axle* when it is said there are over 150 individual parts of the *rear axle* mechanism that must be carefully machined and fitted to micrometer measure. This mechanism must be compact, silent and of great strength to transmit the power of the engine to the driving wheels with the least possible friction or loss of power.

The Salisbury New Pressed Steel Rear Axle is produced in our two big plants after 15 years' successful building of front and rear automobile axles, complete with hubs and brakes, for the trade. It combines the great strength and durability of our own special formulae steel with simplicity of construction.

Made in three standard sizes for cars weighing 1700 to 4000 pounds.

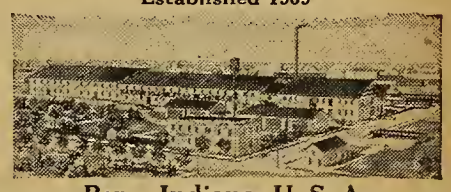
The manufacturer who specifies our axles adds a strong selling point to the prospective purchaser.

SALISBURY AXLE COMPANY
Established 1902



Jamestown, New York, U. S. A.

PERU AXLE COMPANY
Established 1909



Peru, Indiana, U. S. A.



Stifel's Indigo Cloth
Standard for over 75 years
STIFEL REGISTERED

Look for the boot trade-mark on the back of the cloth, inside the garments before you buy.



For Men's Overalls, Jumpers, Uniforms

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The strongest, fast color, work-garment cloth made.

Garments made of Stifel Indigo sold by dealers everywhere

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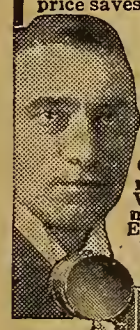
We are Manufacturers of the cloth only

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WITTE

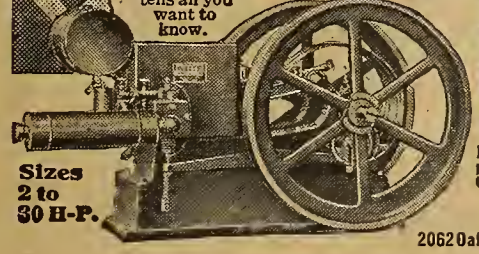
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Burn cheap fuel—Big surplus power—Easiest kerosene engine to understand and operate—Most reliable—Latest improvements—Fewer parts—Balanced construction—Automatic feed control on varied load—Webster magneto, or battery ignition. Every engine or outfit ready to use on arrival. Factory price saves you $15 to $200.



LIFETIME GUARANTEE

On Every Part of Your Engine, Just as Agreed. Cash or Easy Payments. Quality assured by 33-year record of reliability. Largest factory of the kind in United States. Immediate shipment from Kansas City or Pittsburgh, whichever is nearest you. Full description of WITTE Engines, all styles and sizes, in my big 4-color book, "HOW TO JUDGE ENGINES"—FREE, by Return Mail. It tells all you want to know.



Sizes 2 to 30 H-P.

WITTE PORTABLES

Kerosene Gasoline

Sizes, 4 to 22 H-P.

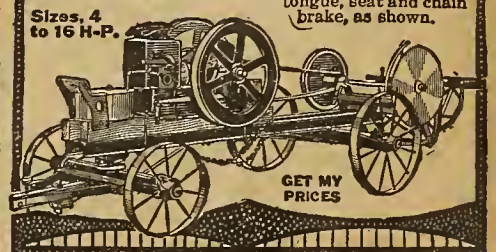


Ready to Use When You Get It.

WITTE SAW-RIGS

A Money Maker. All Steel Trucks—Ready to use when you get it, with saw, saw frame, pulley, belt, tongue, seat and chain brake, as shown.

Sizes, 4 to 16 H-P.



GET MY PRICES

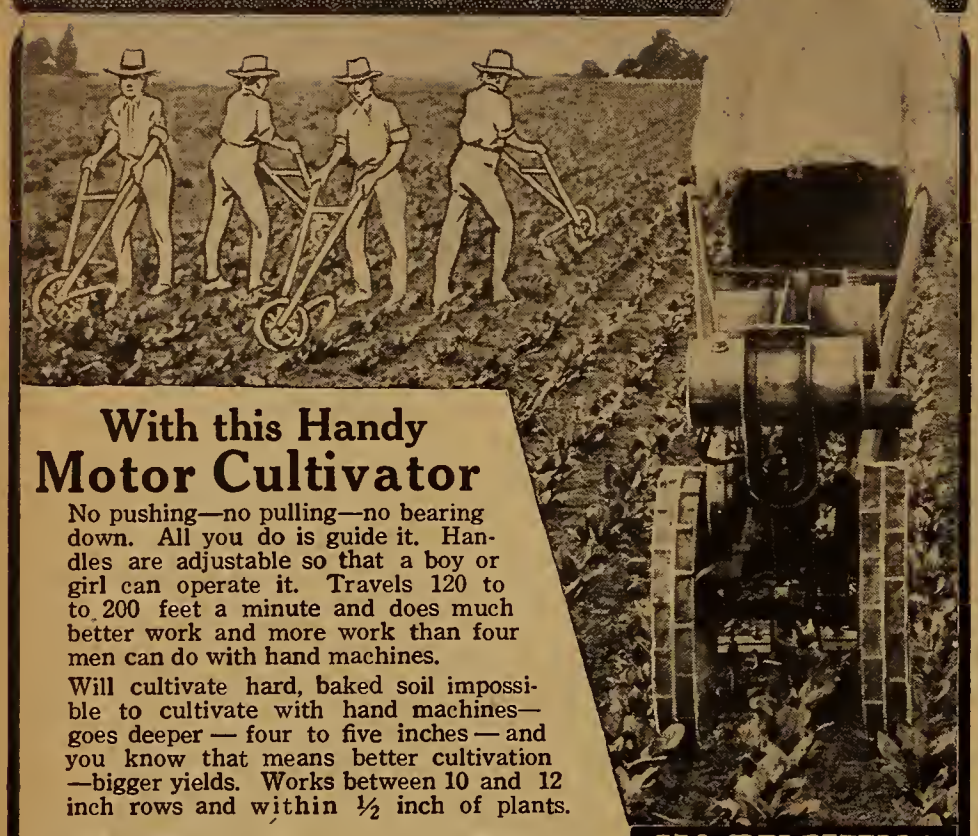
WRITE ME TODAY

Before you agree to take any engine get my new book and prices on 2 to 30 H-P.—Stationary, Portable and Saw-Rig Outfits. I save you money and time.—ED. H. WITTE, Pres.

WITTE ENGINE WORKS

2062 Oakland Ave., Kansas City, Mo. 2062 Empire Bldg., Pittsburgh, Pa.

ONE MAN
Does The Work of Four



With this Handy Motor Cultivator

No pushing—no pulling—no bearing down. All you do is guide it. Handles are adjustable so that a boy or girl can operate it. Travels 120 to to 200 feet a minute and does much better work and more work than four men can do with hand machines.

Will cultivate hard, baked soil impossible to cultivate with hand machines—goes deeper — four to five inches — and you know that means better cultivation —bigger yields. Works between 10 and 12 inch rows and within ½ inch of plants.

MERRY GARDEN AUTO CULTIVATOR

NO PUSHING RUNS ITSELF BOY OR GIRL CAN OPERATE IT

is the biggest labor-saver, biggest profit-producer ever offered to farmers and gardeners.

Does better work—does it faster—easier and cheaper. One gallon of gasoline lasts 4 to 8 hours. Clutch and spark controls on handles. Very simple construction—practically nothing to get out of order. By simply attaching a pulley you have a 2 h. p. portable gas engine for running your cream separator, churn, washing machine, grindstone, pump, saw, etc. For cultivating truck gardens it is a little wonder. Pays for itself in 30 days.

Sold on a Money-back Guarantee

You take no risk in ordering direct from this advertisement. We will allow you a five-day free trial. Here's our Money-back Guarantee. We guarantee this machine to cultivate as represented. If for any reason it fails to do the work, purchaser in accepting same, agrees to notify us within 5 days from receipt thereof. We reserve the right to send a demonstrator and if machine then fails, purchase money will be refunded. **Price $185 f. o. b. Cleveland, Ohio. Shipping weight 250 lbs. For further information, address**

THE ATLANTIC MACHINE & MFG. CO., 434 W. Prospect Av., Cleveland, O.

WANTED—Live Wire Representatives in All Localities.

Only $2 DOWN ONE YEAR TO PAY



$38 Buys the New Butterfly Jr. No. 2½. Light running, easy cleaning, close skimming, durable.

NEW BUTTERFLY

EASY TO CLEAN

Separators are guaranteed a life-time against defects in material and workmanship. Made also in four larger sizes all sold on

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and on a plan whereby they earn their own cost and more by what they save. Postal brings Free Catalog Folder. Buy from the manufacturer and save money. [9]

Albaugh-Dover Co. 2139 Marshall Bl. Chicago

NEW TIRES At Half Price



Seconds Direct from Factory

making high-class standard tires exclusively. Rejected for slight blemishes or imperfections. Perfect otherwise. Should give as good mileage as Firsts, which are guaranteed for 5,000 miles.

30x3 Regular Price $18.50; Sale Price $ 9.25
30x3½ " " 23.50; " " 11.75

ALL SIZES. $2.00 deposit on each tire with order. Money refunded if not satisfactory.

Mid-West Tire Co. 176 N. Michigan Ave. Dept. D Chicago

KOR-KER PRESERVES TIRES



What many autoists believed impossible has been accomplished

Tires *can* be made *puncture proof* and *leak proof*. For **seven years and in forty different countries** thousands of autoists have been enjoying the luxury of riding free from the worry or care of punctured tires, by having them Korkerized.

Kor-Ker removes the bugbear of automobiling.
Kor-Ker instantly and permanently heals punctures.
Kor-Ker stops slow leaks—makes tires non-porous.
Kor-Ker often gives 50% more mileage.
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Kor-Ker reduces possibility of blowouts to a minimum.
Kor-Ker saves many dollars a season.
Kor-Ker saves you the delay and bother—of a puncture on the road.

Send for literature.
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ALCEMO MANUFACTURING CO.
143 Bridge St. Newark, N. J.



SELDOM SEE

a big knee like this, but your horse may have a bunch or bruise on his ankle, hock, stifle, knee or throat.

ABSORBINE TRADE MARK REG. U.S. PAT. OFF.

will clean it off without laying up the horse. **No blister, no hair gone.** Concentrated—only a few drops required at an application. $2.50 per bottle delivered. Describe your case for special instructions and Book 8 R free.

W. F. YOUNG, INC., 23 Temple St., Springfield, Mass.

ELECTRIFY YOUR FARM

MATTHEWS FULL AUTOMATIC TRADE MARK

LIGHT AND POWER PLANT



(Specified standard by the U. S. Govt.) **Full Automatic**—the **only** plant that starts and stops itself. Built with General Electric generator, Schebler carburetor, Stewart Vacuum Gasoline System and Willard Batteries—**Built in eight sizes—from 15 lights to 1000 lights.** Write for illustrated catalogue.

Consolidated Utilities Corporation, 737 Michigan Ave., Chicago, Ill., Factory Distributors
Reputable Dealers Wanted

More Tractor Experiences

By Readers of Farm and Fireside

HERE is my tractor experience and what it has taught me:

In eight years, on my farm of 100 acres, I have tried out six different tractors. The first four were brought to my farm on trial, but the other two were bought and paid for before they were unloaded from the car.

One third of my farm is level, firm Wabash bottom soil. The middle third is second bottom, level and loam soil. The remaining third is rolling sand.

The first tractor I tried out was a large one-cylinder affair, hitched to a three-bottom plow. The agent, against my positive protest, insisted on trying it out on my sandy soil. I knew it was too heavy for that soil.

The machine worked until we came to the first sand hill, then it began to "dig in," and in less time than you can tell it it was half buried in sand. We toiled for three hours to get it out, when we took it to my bottom land. There is developed all kinds of engine and gear trouble, and when it broke its big cogwheel the agent wisely concluded that it was not adapted to my farm.

The next one tried out was a lighter machine, weighing about 10,000 pounds and pulling a three-bottom plow. Like the first, it failed on the sandy ground, did fairly well on the level soil, but developed so much engine trouble that the agent confessed it was not adapted to my farm.

The next one was a large machine, pulling a five-bottom plow. My first sight of the machine convinced me that it was not suitable for my farm, and my surmises proved correct. It would only work on the level land, where it pulled five plows, plowing nine inches deep, doing a fine job of the plowing, but the heavy machine so packed my soil that it was two or three years recovering from its effects.

The next one was also a large machine, and I did not want to give it a trial; but the agent was so persistent I let him try it out. It was a complete failure—it had difficulty in propelling its own weight and would not successfully pull a one-bottom plow.

I was discouraged with the tractor business, and argued with the tractor builders that they were all on the wrong track in making a tractor for the average-size farm. That a tractor suitable for such must be a small, light machine, pulling a one or two bottom plow, and a machine that could be hitched to a harrow, disk, mower, binder, manure spreader, and the like.

The builders laughed at me, and said that such a machine would not be practicable. (Of course this was before the days of the small tractor.) I told them that they need not bother me any more about tractors until they had decided to build such a tractor.

In a couple of years such a tractor was placed on the market, and I again became interested in tractors. But a new sales rule had been put into force. You could no longer try out a tractor before you purchased it. You had to put up the cash, and were then given three days to try it out on a guarantee that amounted to nothing.

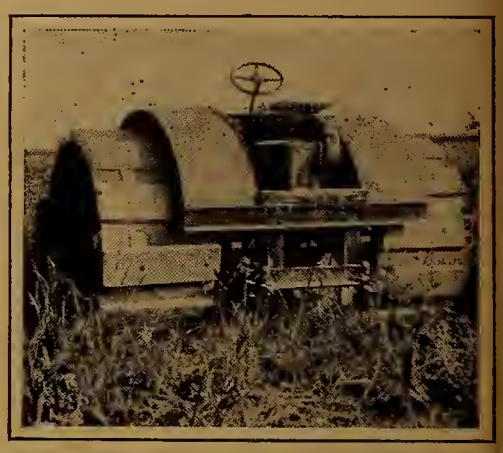
However, I bought an 8–16, light-weight tractor, reputed to pull a three-bottom plow, plowing seven inches deep. As I wanted to plow deeper I purchased a two-bottom plow for it.

The troubles we had with that tractor would have aggravated a saint. First, we had trouble in starting it. At times we would spend as much as two or three hours in getting it to go. We would do everything that the book of instruction told us to do, and even sent to the factory expert to come out and work with it. The expert, after much tinkering, would leave the machine doing fairly well, but he was no sooner gone than the same trouble would develop again.

We also had engine and gear troubles galore. The gears being exposed, the instruction book told us to keep them well greased with hard oil, but the grease would catch the grit in the dirt and hold it, which acted like emery on the gears, cutting them out so quickly that repair bills were startling. About once a week we would have an expert to clear up some engine trouble.

It was such a dirty job to operate the machine that the operator would come from the fields looking more like a coal heaver than a farmhand. The machine itself would run up and over sand hills; but hitch any kind of a load to it, even a harrow, and attempt to go up and over the sand hills, and it would begin to "dig in." And if it was hitched to a plow it would even dig into level sand land, or so break down the furrows that it could not be successfully operated. To sum it all up, it proved so unsatisfactory that I sold it at a loss of $300, to be used to run a hay baler.

My last tractor experience was with one of the lightest tractors made, designed to pull a sixteen-inch one-bottom plow,



Extension rims and broad wooden lugs make easy going when the ground is soft

nine inches deep, a harrow, disk, manure spreader, mower, etc. This came nearer filling the needs of my farm than any other tractor I have yet seen. But it had a defective oiling system that gave us a lot of trouble. And its exposed gears gave us a lot of trouble until we quit putting grease on them. It was as easy to start it as it is to start an automobile. Hitched to a plow, manure spreader, harrow, mowing machine, or any kind of farm tool, it did fine work. But the defective oiling system and its exposed gears made it expensive to operate; and, like all other tractors I had tried out, it would not work on my sandy ground.

I have spent a lot of time interviewing farmers who have tractors, and, with my town experience, I find that these are the troubles which have been met with in the operation of the tractors: first, difficulty in starting the tractor; second, the quick wearing out of gears that are exposed; third, defective oiling systems for the engine; fourth, packing of clay and heavy black soils, and their inability to work on sandy soil.

The ideal tractor must be one that can eliminate the first, second, third, and first part of the fourth. I doubt if a tractor can be made that will successfully work on sandy soil.

And the ideal tractor must be one that can be as easily operated as an automobile, and as cleanly.

William C. Smith, Delphi, Indiana.

Machinery an Investment

WITH prices of all metal articles at the point where they are, this is no year to neglect farm machinery. The person who leaves his machinery in the field where it was last used it, or in the yard, is a sure loser.

Not only is it worth while to store the implements in a shed or other building big enough in which to overhaul them, but they should receive the right sort of attention before being put away. Soap and water, paint, and grease are the big essentials. Rust and dirt should first be removed, soap and water being used where necessary. A wire brush is useful in getting rid of rust.

The framework of the machinery should be painted to prevent deterioration. A paint comprising a good red pigment and linseed oil will give the desired results, Good axle grease should be applied to the metal parts which are liable to rust. Throughout the winter, you will be repaid by looking over the implements occasionally, greasing them again if they seem to need it.

At present prices a piece of farm machinery is an investment of some moment, and only by proper care can one hope to make it yield a reasonable return. E. D.

Cotton, Dairy, and Hog Farmers Unite to Fight Big Oil Imports

[CONTINUED FROM PAGE 11]

So Manchuria will figure rather prominently this year both in Congress and in tariff board hearings. For some time that land has been a great center of interest in diplomatic circles because of the amazing struggle of several nations to secure trade and territorial domination there.

The customary milling ratio of soybeans to bean cake is 24 to 23. Using this method of computation, and adding the result to the actual beans exported, we have the equivalent of Manchurian beans exported during the last eight-year period as follows:

1911	1,724,292	short tons
1912	1,374,438	" "
1913	1,482,003	" "
1914	1,482,236	" "
1915	2,001,416	" "
1916	1,537,782	" "
1917	1,964,593	" "
1918	2,042,000	" "

Phenomenal Development of Production in Sight

The 1919 crop will be fully as large as that of 1918, on account of the Chinese farmers' belief that the war settlement will enable the beans of North Manchuria to move freely to market somewhere; and that somewhere will in all probability be Denmark and Germany, once the bars are down on export. No matter where the beans move, they will have an effect on the cottonseed-oil market if stabilizing methods are not continued in this country. European firms have for years been buying direct from the farmers in North Manchuria. Last year several large firms purchased and stored quantities, so as to begin immediate shipment to Europe upon the cessation of hostilities. And this fact may have something to do with relieving Europe's present fat shortage.



A Manchurian farmer making a home-power soybean millstone

If immigration continues into Manchuria at the present rate, within ten years the quantity of oil that can be obtained from the bean crop over there will be equal to the amount of cottonseed oil that can be extracted from 10,000,000 bales.

Such increase is hardly probable, although many stranger things have happened in the Orient; but its eventuality may produce radical changes in the world's outlook on supply and character of its fats.

As to North Manchuria, the Japanese, while having a strong foothold, do not actually control the situation, and there is plenty of opportunity for competitive buyers. At all times the bulk of the beans is in the hands of Chinese, who will sell where it is most advantageous. But the Japanese naturally look with longing eyes upon this the larger and richer part of Manchuria, and they are pouring into the provinces of Kirin and Heilungchiang with great rapidity.

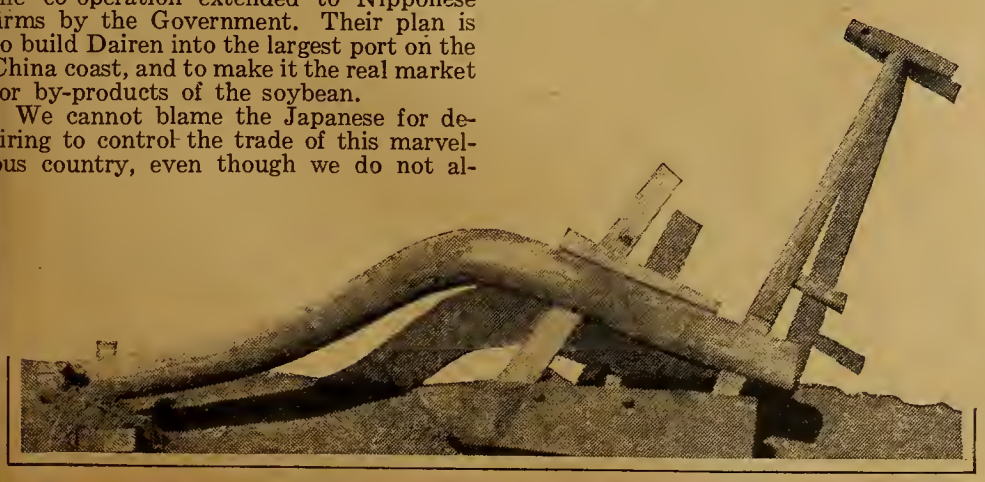
Trade Policy of Japanese

In South Manchuria the Japanese have the upper hand in all trade matters, due to their control of railroad facilities and the co-operation extended to Nipponese firms by the Government. Their plan is to build Dairen into the largest port on the China coast, and to make it the real market for by-products of the soybean.

We cannot blame the Japanese for desiring to control the trade of this marvelous country, even though we do not always endorse her methods of achieving her ends. On the other hand, there is a great possibility opening to American interests by the international control of the Trans-Siberian Railway, which has been arranged between the great powers and the Kolchak Government of Omsk, Siberia. By this arrangement the United States has undertaken to reorganize and put on an efficiency basis this great line. Included in the agreement is the Chinese Eastern Railway, which for the past two years has had American railway instructors stationed at various division points, preparing the Russian operatives for radical changes in handling trains. Internationalizing, for a time, of this line means reopening of Vladivostok as a great shipping port, and insures fair treatment to all shippers.

Liberation of transport in Manchuria will bring soybeans even more directly into competition with cottonseed. So the farming interests and the cottonseed-crushing interests have at last found something in common—an outside rival of cotton oil. And you gentlemen of the cotton fields, dairy barns, and swine herds, what are you going to do about this matter? It is entirely in your power to say whether the bars shall remain down, or whether American farmers shall be protected from the competition of nations that have lower living standards. If you write your congressman, and tell him to get busy and do something, it will have its effect, and make it easier for your leaders in the farm organizations who are on the ground now fighting your battles for you.

NOTE: This is a problem affecting farmers in all sections of the United States. It might be worth your while to write your senator or representative and urge prompt action on this important matter. THE EDITOR.



A typical Chinese wooden plow

Cheaper Hog Corn

By George W. Brown (Ohio)

SELF-FEEDERS with a balanced ration aid in cheapening the corn crop fed into hogs, but they will not do it all.

We can cheapen every bushel of corn fed into our hogs by about 20 cents, and this score of pennies goes onto the credit balance at market time, where we want the greatest profit.

Topping our cornfields, instead of cutting up the whole stalks into shocks, gives us the advantage of snapping in the husk load after load of corn for winter feeding. Swine like to tear into these husks and find the rich grains. Just try it on a bunch of hogs that are tired of your bare-husked, expensive ear of corn upon which you have expended six or eight cents a bushel for shocking and husking.

After our hogs have got used to new corn, sparingly fed for a few days, we turn them into a plot hurdled off, and they gladly do their own husking, and we have saved another job of high-cost labor for human hands.

Heider

11 Years' Actual Field Work

FOR eleven years America's leading power farmers have used the Heider in *every kind* of tractor work. Heider principles have been tested by time and found to be absolutely correct.

15 to 20% Fewer Parts

The fewer the parts through which the power has to travel, the more power delivered at drawbar or belt.

Heider Tractor's simple construction does away with 15 to 20 per cent of parts. It does away with clutch, transmission, gears, and bevel gears.

This leaves the maximum power for tractor work—with less upkeep expense.

"We have been operating a 12-20 Heider 4 years and it has at all times been strictly on the job." J. A. and H. J. Schmidt, Rock Rapids, Iowa.

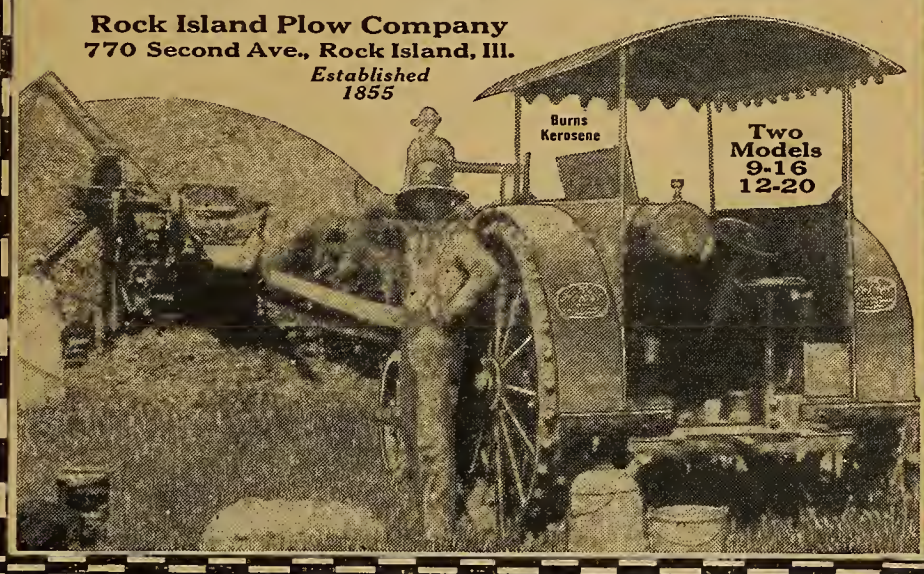
No Gears to Strip

With the Heider Patented Friction Drive the power is taken *directly from the flywheel* by two large metal discs at either side—one to go ahead, the other for reverse.

No jerking, no vibration, NO GEARS TO STRIP. Tractor always "in mesh." *Seven speeds forward and reverse*, all with one motor speed and one lever for traction or belt. Send for catalog of Heider Tractors; the famous Rock Island Tractor Plows, 2, 3 or 4 CTX bottoms, and the Rock Island one-man Tractor Disc.

"I bought a Heider 9-16 with plow attached last spring and am highly pleased. Would not exchange it for any other." Eugene Sites, Elyria, O.

Rock Island Plow Company
770 Second Ave., Rock Island, Ill.
Established 1855



Guaranteed SEEDS



FREE SAMPLES A postal card will bring them. Get highest quality of guaranteed seeds from us at wholesale prices and save one profit. We deal direct with you. All seed subject to government test.

Alsike and Timothy Mixed

Cheaper and better than timothy and best and cheapest seeding known. Makes great hay and pasture combination and will grow on any land. Our seed tested and recleaned and equal to the sample. Will go much farther than ordinary field seed. Quick service. Write today for samples and circulars on all grass and field seeds and feeds. The big saving will surprise you. Don't delay. You have got to be satisfied before any transaction is completed. Complete line Field, Grass and Garden Seeds, Feeds, Garden and Poultry Supplies.

DAVE PECK SEED COMPANY, Dept. 43, Evansville, Ind.

Big Crops in Northwest Texas on the New Line of the Santa Fe

The Federal Railroad Administration has authorized the completion of the new Shattuck Branch of the Santa Fe Railroad to take care of this year's big crops—wheat, oats and sorghums. This will open for immediate settlement and development a large block of my land in a wheat and stock-farming section of Ochiltree and Hansford Counties in Northwest Texas near Oklahoma State line, where the first crop has in a number of cases paid for the land, and where cattle and hogs can be raised at a low cost. Land is of a prairie character ready for the plow. **No stone, stumps, no brush to be cleared,** at attractive prices on easy terms. Climate healthful, rain falls during growing season. Write for free illustrated folder, giving experience and results settlers have secured in short time on small capital. T. C. Spearman, 988 Railway Exchange, Chicago, Ill.



Steel Wheels

Cheaper than any other wheels when you figure years of service. Make any wagon good as new. Save labor—easy to load. COST LESS

EMPIRE No repairs. Write for FREE Book. Mfg. Co., Box 268, Quincy, Ill.



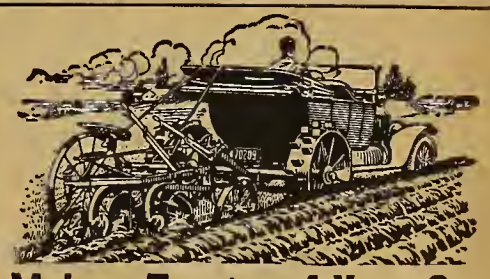
DAYTON AIRLESS TIRES

Can't Puncture
Can't Blow Out

Piers of live, elastic rubber built about one inch apart inside the casing and vulcanized or welded to it take the place of an inner tube. Nothing can happen but wear. 30x3 and 30 x 3½ sizes only—Ford sizes. More than 50,000 cars equipped with them in 6 years.

Big Money in becoming our exclusive dealer in your county. Tire experience unnecessary. Write today for terms.

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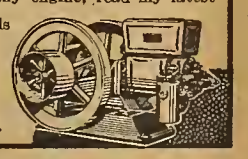
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Are cheap teachers going to be good for your children?

JOHN GRIER HIBBEN, President of Princeton University, gives some startling facts in answering this big question.

Doctor Hibben succeeded Woodrow Wilson as President of Princeton in 1912. He has devoted his life to just such educational problems as this one.

Here is what John M. Siddall, Editor of The American Magazine, says about the article:

THE small pay that teachers get is an old story to me. I was born and brought up in Oberlin, Ohio—where Oberlin College is located. In my time the most that any full professor received was eighteen hundred dollars a year. The instructors and assistant professors got much less. And the public-school teachers in the town—most of them intelligent, conscientious, loyal people—worked for next to nothing.

In recent years the Oberlin professors have had an increase; but none of them is so overburdened with salary that he rushes out and gives himself up to riotous living. Quite the contrary. You know just as well I that it's a joke—the pay that teachers get. Especially when you consider the years of preparation they put in, during which period they spend money rather than earn it.

The colleges and school boards are not to blame, most of them at any rate. They simply haven't the money. They are nothing but stewards, anyhow. The real power to raise the pay of teachers lies with you. It will be raised when you folks who have children get it into your heads that the teaching profession is going down hill and that your children are suffering. Then you will wake up and demand that teachers be paid what men and women of intelligence, energy, and enthusiasm should receive. And you will demand that we *get that kind of teacher.*

The situation is so serious that we sent a member of the staff to get from President John Grier Hibben of Princeton University a plain statement of facts. Before giving the article his approval President Hibben went over it line by line. It stands as a great educator's revelation of a crisis which affects every man and woman in America.

—In the September issue of

The American *Magazine*

Published by The Crowell Publishing Company
Also Publishers of Woman's Home Companion, Farm and Fireside



How Would You Like to Be a Modern Knight of King Arthur?

IS THERE any boy who would like to belong to such a band of gallant knights as is shown above? To mount a gallant steed and ride away in quest of noble deeds would thrill the heart of any lad. This is a band of Farm Boy Cavaliers of America—a farm boys' organization which is mounted on horses. It is not a military organization, but engages in peaceful pursuits of a useful nature. In this picture their leader is pointing out to them a camping trip which they are going to take this summer.

Any boy who is twelve years old and can mount a horse from the ground and ride at a gallop can become a member. Girls can join, too, the sister organization called the Home Cavaliers, and they also learn how to ride, in addition to other useful things.

There are different tests to pass in order to qualify for the higher degrees in these organizations, such as pig and calf raising for the boys, and making bread for the girls.

If you think that you would like to be a Cavalier, and there is no band in your neighborhood, write to me at 381 Fourth Avenue, New York City, and I will see that you learn all about it. THE EDITOR.

The Sheep Killer

[CONTINUED FROM PAGE 30]

steps and into the house, the screen door slamming behind him. When he came out he was ramming shells into his gun, the gun that never missed, and his face was eager.

"All right, old man!" he said, then with a grim smile to mother and boy, "Come on!"

They hurried through the yard and the barn lot. Behind the barn Frank broke away.

"Come in!" ordered Earle.

Halfway across the fields he broke again. Again, in a low voice this time, his master ordered him in. Quivering in every muscle he waited. They had all heard now; he could see it in their faces, pale in the moonlight.

In the hollow of his master's arm glistened the satiny little shotgun—the gun that never missed. Behind them, the mother had caught the boy by the hand. The three as they hurried along were very silent.

When, sharp and quick, his master spoke, it was as if a rope tied to his collar and holding him in had been cut.

"Hie away!"

The pasture just ahead, dotted with scrub pines that lifted their heads above a thin silvery mist, was surrounded by a high rail fence. A powerful bound that lightly touched the top rail with his hind feet and he landed in the arena with a grunt. Over there, huddled together, panting, bleating in helpless terror, was the flock. Here and there lay prostrate forms. And yonder in a bald spot, white with moonlight, a big burly mongrel, a no-man's dog, stood with raised head and grinning fangs above his latest victim. Straight at him, raging, rushed old Frank.

Twice before these two had met, and one was master. But mad lust of blood makes even cowardly marauders bold, and tonight the big mongrel met the setter breast to breast. Snarling they reared, straight up like men, foam flashing from their fangs as they slashed and tore at one another's throats.

Steve Earle had jumped the fence, mother and boy were clambering over, yonder from the opposite direction came John Taylor on the run. Still reared up like men in the moonlight, their ears thrown back, their eyes gleaming, the mongrel and the setter slashed and tore at one another's throats.

It was too fierce to last long. It was the mongrel who broke and fled. But the setter was on his back, biting the hard neck, then running alongside with blazing eyes, then springing again on the back. Behind, Steve Earle was shouting. Once more they reared straight up. Once more the mongrel broke. Once more, far behind now, came the shouts of Steve Earle and of Mr. Taylor.

"Come in, Frank! Come in!"

And now old Frank heard and paused. From the gun that never missed bellowed two shots. He saw the marauder tumble, try to get up, tumble again. He ran at him and stood above, growling low. He saw him writhe, kick, gasp, lie still. He got the smell all animals know—the smell of death. Then he looked up from the corpse of his vanquished enemy. There close beside it lay a dead lamb.

Some dogs, like some men, destroy. Other dogs, like other men, protect. It is not only man that breeds both anarchists and law-abiders. And now the sight of this prostrate little mass of torn flesh and bloody wool, of those staring dead eyeballs, of that slender tongue lolled out in the dirt, filled the big setter with dismay. Sadly he whiffed the carcass. Ears dropped, eyes worried, he looked across the pasture toward that group of people watching him with white tense faces. Then, as it had done on that other night, the instinct to retrieve, the desire to carry to his master this tangible evidence of things as they should not be, came upon him, and he picked the lamb up in his mouth.

It was a limp, flabby, unwieldy mass. The dangling legs got entangled in his feet; his fangs tore the tender flesh. His mouth and teeth filled with greasy wool, he laid his burden down, coughing, grinning comically like a person who has swallowed some untasty object. He got down on his belly and tried to paw the wool out of his way as if he were washing his face. Then once more he picked up his burden and started for his master.

They were coming to meet him now with shining faces.

"That's what happened three nights ago," John Taylor was explaining excitedly. "He had just driven that dog off. He was trying to drag the sheep home, Steve!"

"Sure," said Earle.

And Tommy, running beside his father, was shouting over and over again in a shrill triumphant voice:

"I tol' you, Papa! I tol' you F'ank never killed no sheep!"

Something You Can Do

[CONTINUED FROM PAGE 26]

standards raised by these examinations and the treatment for defects which followed.

To be physically independent, the equal of every other child, *your* child must have pure air to breathe, clean water to drink, properly balanced food to eat, enough sleep to rebuild body tissues destroyed by work and play, enough fun to balance daily tasks, and education in health habits.

No child *asks* for these lawful privileges. Sometimes he tries to evade them as stern duties. It is the job of parent and teacher to see that he regards them as privileges, and not as undesirable tasks.

When your schoolhouse is improperly ventilated and heated by an air-tight stove, you rob every pupil of an inalienable right—pure air—and you lower the standard of child health in your community.

Clean water and clean cups or fountain spigots to drink it! You may think of water only as a thirst quencher. Your child *must* have it to cleanse his system.

A groaning table, an overflowing lunch basket, or a liberal spending allowance for your child does not necessarily spell the food which will nourish him. The other day I saw, crowded around a schoolyard fence, three venders of peanuts, four of candies, two of ice cream, three of doughnuts, fancy cakes, and macaroons, one of fruit, but not one of milk or sandwiches.

I began to understand why the Child Health Organization is demanding lunchrooms in school buildings, with properly balanced food, sold at cost.

"Hah!" cries Father. "I was just expecting some such nonsense. It can't be done. I'm on the school board, and it's all we can do to pay the teachers. That's all very well for city schools, but rural schools are a different proposition."

Well, way down in a remote corner of Virginia it has been worked out in one of the so-called central schools. The pupils, who come miles in every direction, are gathered up by automobiles, supported partly by the school fund, partly by the parents. In the hotel, a block from the school, is the dining-room for pupils. I stumbled into it by mistake while looking for the room set aside for hotel guests.

In that dining-room were long tables covered with white oilcloth, and entirely surrounded by chattering children from six to sixteen years. Some had ordered bowls of steaming soup, others warm meat stew, cocoa or milk, and most of them had brought cakes or other sweets from home. No item on the bill of fare ran higher than ten cents, and there was not an indigestible dish on the list.

Have you a public-spirited citizeness living near your school who might do this? If not, then the Child Health Organization stands ready to help you plan the contents of your children's lunch basket.

The Child Health Organization can save Mother's strength and build up her child's at the same time.

And education in good health habits, what does that mean? Some little things which we have ignored as unimportant.

Just the little matter of clean teeth. Of course, you bought Billy a toothbrush and told him to clean his teeth every day. But Billy forgets. He does not tell you about the resultant toothache. The pain makes him nervous and his lessons suffer. It hurts him to chew, so he bolts his food, and his stomach rebels. He loses weight.

Where does the Health Organization come in? Why, at school! There Billy learns what is the matter with him, why he feels so wretchedly, and why he is not keeping up with his class. So he asks you to take him to the dentist, and thereafter keeps his teeth clean.

You tell Billy to take a bath, fill the tub, and go about your many duties. Billy gets through with it as quickly as possible, slipshod fashion, and rushes off to something more pleasant. At school the Child Health Organization program teaches him all about his pores and what they carry off, provided they are open—and what stays inside if they are clogged with dirt! The next time Billy bathes with care, rubbing the pores open. He wants to be strong—every boy does.

Are you beginning to understand what the Child Health Organization can do for your boy or girl? Beginning to feel interested?

Of course! Then organize.

Any teacher, member of the school or health board, physician, Red Cross chairman, or public official in your community may send a stamped self-addressed envelope to Mr. Owen R. Lovejoy, secretary Child Health Organization, 156 Fifth Avenue, New York City, for information concerning the campaign.

If you want to interest some of your local people in the movement it will pay you to send for a complete set of literature:

Teachers' Service Booklet
Weight Card, showing proper relation between weight and height for boys and girls.
Demonstration Booklet, the story of twenty-five boys who grew strong on balanced rations.
Standards of Nutrition and Growth.
How to Conduct a Nutrition Class
The Diet of School Children
Wanted: Teachers for Child Health Education.
War Prices and Undernourished Children
Tag, used in weighing contests
Class-room Record

This complete little library costs less than 50 cents, and is illuminating.

Think it over, then write to Mr. Lovejoy. You can even have a field worker look your school over, if you like. You can—but why say more? Write to Mr. Lovejoy—he *knows*.

Forage Made Him His Profit

By L. E. McGinnis

CHAS. C. CARDWELL, New Florence, Missouri, found his rape pasture to be the deciding factor between profit and loss in feeding his hogs. Mr. Cardwell had 28 shotes, averaging about 137 pounds the first of June. He also had a half-acre barn lot, where he had been feeding hogs for the last three or four years, sowed to rape.

Owing to the well-fertilized condition of his lot, due to his hog-feeding operations in previous years, he had a fine stand of rape, it being about two feet tall and very thick at the time he turned in the hogs. Only 23 of the 28 hogs were put on the rape, five being kept in an adjacent dry lot as a check on the others.

Both lots had all of the corn and tankage they would eat, the check lot being fed exactly the same as the others, only they were not allowed on the rape.

FOR THE 23 HOGS ON RAPE PASTURE

Grain per day per head—corn, 6.125 lbs.; tankage, .28 lbs.	
Original average weight per head	136 lbs.
Original value per hog at 16c	$21.76
Number of days fed	64
Average value feed consumed—corn at $1.50 per bu.; tankage, $5 per cwt.	$12.40
Final weight per head	216 lbs.
Total gain per head	80 lbs.
Average cost of one pound of gain produced	$.155
Final value per hog at 17c	$36.72
Total profit per head due to the operation	$2.56

FOR THE FIVE HOGS IN THE DRY LOT

Grain per day per head—corn, 9.66 lbs.; tankage, 31 lbs.	
Original average weight per head	139 lbs.
Original value per hog at 16c	$24.24
Number of days fed	64
Average value of feed consumed per head—corn at $1.50 per bu.; tankage at $5 per cwt.	$14.25
Final weight per head	201 lbs.
Total gain per head	62 lbs.
Average cost of one pound of gain produced	$.23
Final value per hog at 17c	$34.17
Total loss on operation	$2.32

The rape pasture was charged against the hogs running on it at the rate of 15 cents per month per hog.

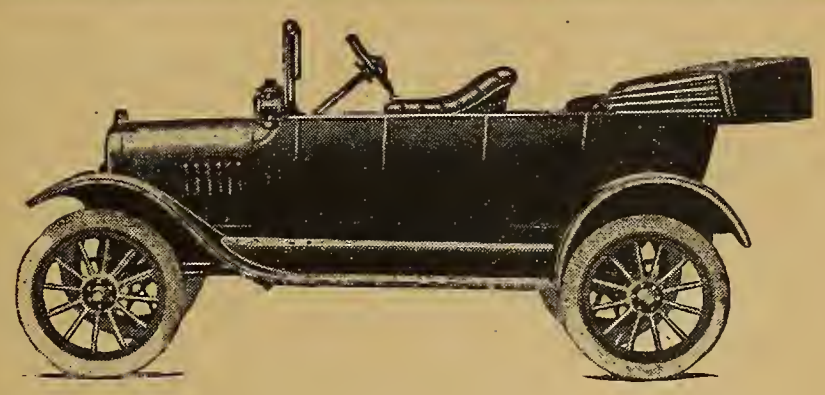
You will notice that the hogs in the dry lot consumed 9.66 pounds per head of corn compared with 6.125 pounds consumed by those on pasture.

The total gain per hog in the check lot runs 62 pounds compared with 80 pounds of those on pasture.

The total profit for the operation for the 64 days of the hogs on the forage was $2.56 per head compared with a loss of $2.32 per head of the ones in the dry lot.

This feeding test of Mr. Cardwell's was run in co-operation with the Government and the Missouri College of Agriculture, a representative of these institutions being there at the start and close of the operation, and making several intermediate visits.





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Our Letters to Each Other

A page whereon we take a few lines every month to talk things over, so if you've got anything on your mind, let's hear from you

SEEMS like life nowadays is just one blamed tax statement after another, doesn't it?—even to us folks who have to figure a bit to squeeze a little extra gas money out of the family budget.

I just got through paying a little federal income tax the other day when along came a dun for my *state* income tax, if you please—one cent a year out of every dollar I make. In the same mail were several letters from you folks saying, in effect, "Ain't it awful!"

Well, it's pretty awful, I'll admit. But it has been worse. It has been worse. I got to prowling around, and found some funny facts about taxes, and, thinking you might be interested, I'll pass along a few of them:

In dear old England in 1695 Pa and Ma were taxed two shillings every time the stork brought a baby. That was for poor folks. They had a sliding scale, the tax being according to the baby's rank. A young dukelet cost $150.

They laughed at a man in the Jersey legislature last year who wanted a tax on beards. But Queen Elizabeth charged three farthings for every whisp of face hay more than two weeks old. And two centuries ago Peter the Great charged every nobleman 100 rubles for the privilege of wearing a beard.

Old Chancelor Pitt rendered himself exceedingly popular along in 1798 when he put a tax not only on all the folks, but on all the horses too. One slick farmer got around it by riding his cow to and from market.

FARM AND FIRESIDE

The National Farm Magazine

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Victor S. Aubry, New Jersey, *Poultry*

You are invited to ask questions of any or all of these men in their respective fields. State your problem clearly and fully, enclosing a stamped self-addressed envelope for reply. Address each editor care of Farm and Fireside, 381 Fourth Avenue, New York.

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She Wants to Move

Well, some of us have one thing to worry about, and some another. Here's a letter from R. E. W., down in Virginia, who has troubles of her own, or thinks she has:

"I love," writes R. E. W., "freedom and sweet peace, such as they tell me are known in California, and I want to go there. I know a number of wealthy families who came from there, and they seem so different from the people right around us that I have grown up with."

Then she goes on to tell how hard it is for her to get along with the folks in her part of the country. She thinks if she can just get to California all will be roses and sunshine, and everybody will be lovely.

Not so, R. E. W. Human nature is just the same in California as in Virginia. Good, bad, and indifferent, pleasant, unpleasant, and colorless souls abound there just as they do where you are. I strongly suspect that the trouble is not so much with those around you as with yourself. Friendliness and good nature in yourself beget friendliness and good nature in others. Have you ever tried that tack with your neighbors—just being your natural, cheerful self, picking out the good points in others and ignoring the unpleasant ones? And did you ever think that maybe you like the California folks best because you started right with them?

Yours is no new woe, R. E. W. Thousands of us have had it. I used to be that way myself. You're eighteen now. Try friendliness in Virginia until you're twenty-one. Then go to California if you want to. But if you run away from the folks around you now you'll be trying to run away from yourself—and that you cannot do.

Here's a Happy One

Just look at the difference between this note from Mrs. C. J. Kestner and the one from R. E. W. And they're both from Virginia. Looks like folks *can* be happy there, after all:

"I am going to address you as 'Dear Friend,' for FARM AND FIRESIDE is an old friend of mine, though I cannot claim that I am a banner subscriber; but I think I am almost a banner reader, for my mother subscribed for FARM AND FIRESIDE when I was just a little girl (I am forty-eight now), and when I was married twenty-five years ago I subscribed, and have been taking it ever since. One of the girls caught me feeding the chickens, so here I am if you care to know how I look."

Indeed we do care, Mrs. Kestner. Any woman who's sensible enough not to be afraid to walk right out on the front porch and tell her age like that can have our vote anytime. I'll bet they're fine chickens, too, though we can't see 'em in the picture.



Under this next head the reading won't be so pleasant, but here goes:

What a Farmhand's Wife Thinks About It

We've heard a good deal about what the farmer thinks of the farmhand situation, and it's aplenty. But here's the other side of the proposition, from a farmhand's wife, and feeling that perhaps there was a little food for thought in it for all of us I'm going to pass it along:

"Your April issue," writes Mrs. R. H. B., "gives the idea that there are people who think the hired man is human. Some do; and some don't. I know, because we live in a hired man's house.'

"It has four rooms. We get four gallons and a half of milk a day. We have a hen house 14x14 feet. We get a garden patch 70x10 feet. We plant one bushel of potatoes in the garden and one bushel elsewhere. My husband gets $45 a month, and our thirteen-year (overgrown) boy gets $30 from the first of April. I sell four to six pounds of butter every two weeks. I do not let anyone know I sell butter. If I did they would soon stop the milk business. I have my own chicks of 58 hens. I sell from 25 to 37 dozen eggs, or from $12 to $16 worth, and through the winter $6 to $8 worth.

"But our four-room house is an old, dilapidated schoolroom partitioned, one room box-built on, and the kitchen built by the back shed porch. The schoolroom is 10x12 feet. Our cob house had no roof to speak of. There are no trees, and the garden is filled with quack as thick as blue grass, and it is next to a ditch which goes through the garden to the well. When the water gets high it covers both well and garden, so our neighbors say it's a sticky muck.

"The man seems pleased with my husband's work. His wife gives me a cordial invitation to 'come down.' She never forgets to remark that Mr. —— likes my husband's work, and always leads to remark as often as possible that she thinks people are poor from choice.

"'We have four children at home,' she says; 'let yours come up.' She does not permit one of hers to come—only a fourteen-year-old girl who always makes stinging remarks—so I keep mine at home. They are so lonely it makes my heart ache. When their children come for the mail and go back, my little eight-year-old girl's lips and chin quiver, and my six-year boy cries, too, with the heartache of loneliness.

"This man's father staked him for their 50 acres, and helped him to pay for it. Her grandfather and grandmother buy and give them many, many things. His father died, leaving him some.

"Now, my children have been carefully raised. They don't go shabby. I lack lots of being a tidy housekeeper, as there are six children at home until the first of April. The two boys, fifteen and sixteen, are gone away since the first of April. She keeps a girl, and makes scathing remarks about people who are not ideal or perfect housekeepers.

"Just last night the children of a neighbor who lives half a mile away came by playing in front of the yard, and when my girlie stepped out they laughed and went a few feet farther away. A farmhand's children are unwelcome. If a man does his labor honestly, reliably, and faithfully, isn't he as noble as other man?

"We both like farm work, and what would I give to be able to set out *our* trees, bushes, and have *our* home, that we can't have right now! We are not contented. These people stand for fine, respectable, honest people. We had no one to stake us. We've had to meet hard circumstances. We had no control over my husband's father. He died when my husband was twelve years of age, leaving four children and a widowed mother.

"I have received more eggs than she. I do as well by clean clothes as she. We wonder if there is a place where farm work isn't a disgrace. Can you enlighten the people through FARM AND FIRESIDE?"

You never spoke a truer word than when you said we think the hired man is a human being. He is human, and his wife and children are human. And if they do their work as they should they are entitled to the respect and good-fellowship of everyone with whom they come in contact.

There are a great many things besides wages that enter into the proposition of getting and keeping the right kind of help on the farm. And the personal attitude of employer toward employes is one of the important things. I know that it is heartbreaking to you to have the youngsters' feelings hurt by other children. But I think perhaps it might help a little if you point out to your children that the ones who treat them badly are the ones who are at fault, and that they themselves have nothing to feel badly about nor to be ashamed of. Snobbishness and vanity and foolish pride never got anyone anything in this world but unhappiness. So long as a man or a woman or a boy or a girl is honest, and clean, and industrious, and self-respecting, there is no one in the world above them, no matter who they are or what they are doing.



I have more respect for a good, honest, efficient, hard-working street cleaner than I have for a bad millionaire or bank president. And so has everyone else.

Abraham Lincoln, who grew up on the soil, living a life much poorer and harder even than you live, was as common and friendly and sociable as an old shoe; and he was just as much so after he got to the White House as he was before he got there. And, goodness knows, *there* was a *man*.

Now I dare say that in all his life, great man though he was, Abraham Lincoln never gave a single person the impression that he felt himself superior to other men. Just the opposite. I saw the other day in a story of his life an account of how the members of his cabinet criticized him for "losing his dignity," because he sat down on the curbstone along Pennsylvania Avenue one day and chatted with an old man he had never seen before, who had come hundreds of miles across the country just to see where he lived.

There are good employers of farm labor. I know dozens of them. They work to help their men help themselves, and when those men have got to the point where they can have little farms of their own no one rejoices more than the good farmer. But I know there are bad employers too. And it is such bad employers who help make the "farm-labor problem" even more of a problem by the way they act.

So don't worry. Hoe your own row. Work with your husband to get ahead. Use your mind as well as your hands to work out plans whereby you can get a little piece of land of your own and till it successfully. Do these things nobly, honestly, and sincerely and keep smiling and you will come out ahead after all.

What's a Dollar Worth?

If you have any good thought on the subject of farmhands and bosses, be sure to let us hear from you after you have read the above. And now, here we are talking about money again:

A farmer boy, writing in "Treat 'em Rough," tells of an interesting experience he had with his uncle concerning the value of a dollar, and perhaps there is a hint in it for the rest of us:

"My first job after leaving college was remunerative to the extent of a very few dollars per week. Every fellow at some time feels very proud to realize that within the depths of his trousers pocket there rests real money earned by his own honest effort. With this sense of pride it was only natural, when the waiter presented the check for our luncheon, that I reached for it.

"Just how Uncle succeeded in paying that check was used for another parallel which holds its place in my memory, and has often presented its true worth in business ventures undertaken since.

"'Son,' he said, 'our ages are quite different. You are starting your commercial race—I crossed the tape at fifty-six, and during that long course from your present age to mine I came to realize the value of a dollar. Now, if you will find the earning power of the small amount of this check at compound interest, or if securely invested in some business over a period of thirty-five years, you will readily see that $2 will be worth. $15.36. That is what your $2 is worth to you when you reach my present age. To me now it is worth exactly the value of its purchasing power.'

"That idea of the value of youthful thrift had never been brought to me in a forcible concrete illustration like that before."

So long till next month.

THE EDITOR.

FARM & FIRESIDE

The National Farm Magazine

SEPTEMBER 1919 — 5¢ A COPY



Mistakes We Make With Our Children

By Joe Wing



Four-fold Quality

When you invest your good, hard cash in a roof, you have a right to expect at least four things of it. These four qualities are all found in *Certain-teed* Roofing.

Weather Protection. *Certain-teed* Roofing, when properly laid according to instructions, is a *one-piece* roof because it is cemented together. It is water-tight, air-tight, and tight against driving rain or drifting snow. Melting snow finds no cracks or crevices to enter. Because of its non-conducting properties neither heat nor cold go through it. It is also a sound deadener—rain or hail beating on the roof do not make such a clatter.

Fire Protection. *Certain-teed* Roofing resists sparks and burning embers. How many times have you heard of a house, or a barn full of stock or crops, catching fire from the chimney sparks? It is worth a lot to you to know that your roof of *Certain-teed* will resist this danger.

Economy. The first cost of *Certain-teed* Roofing is low—up-keep cost practically nothing. *Certain-teed* Roofing is *guaranteed for 5, 10 or 15 years, according to thickness.* This guarantee is backed by the largest roofing mills in the world.

Easy to lay. *Certain-teed* can be laid by anyone who will follow the simple directions that come with the roll. No skilled labor is required.

Certain-teed Asphalt Shingles

for residences come in beautiful subdued tones of red and green. These shingles present a handsome rough surface. They are so laid that three thicknesses cover the entire roof. They lay and *stay* flat and will not crack or break off in the highest wind. This is due to the very heavy soft saturation of asphalt in the center which makes them cling to the roof yet allows them to "give" from a high wind without cracking off. They will prevent fires from sparks or embers—a big item, especially where a building is not within reach of city fire protection service. They cost no more than wood shingles, and are guaranteed 10 years.

(NOTE—It pays to keep a few rolls of *Certain-teed* on hand for emergency roof repairs. It may be the means of saving costly weather damage to your property.)

Certain-teed Products Corporation
Offices and Warehouses in Principal Cities

Certain-teed Paints and Varnishes

are the highest quality and will give you the best results and most economical results. The name *Certain-teed* is your protection in buying. It means *certain*ty of quality and guaran*teed* satisfaction. Dealers everywhere sell *Certain-teed.*

Certain-teed

PAINT VARNISH ROOFING & RELATED BUILDING PRODUCTS



Every Dot represents Ten Satisfied Delco-Light Users

More Than 75,000 Satisfied Users

DELCO-LIGHT was designed and built by men who were raised in farm homes—who experienced the discomforts and inconveniences of farm life—and who set out deliberately years ago to develop an electric plant that would provide city advantages for rural communities.

They were the same men whose engineering talent had made DELCO Starting, Lighting and Ignition Equipment for automobiles the standard of the world—

They knew electricity—and they knew the needs and limitations of farm life—

They knew that an electric plant to give service in a farm home must be simple, so that it would not get out of order and require complicated repairs—

It must be easily operated and require little attention—

It must be very economical in operation—

It must be built to stand hard usage and it must last indefinitely—

It required five years to develop a plant that would measure up to these specifications.

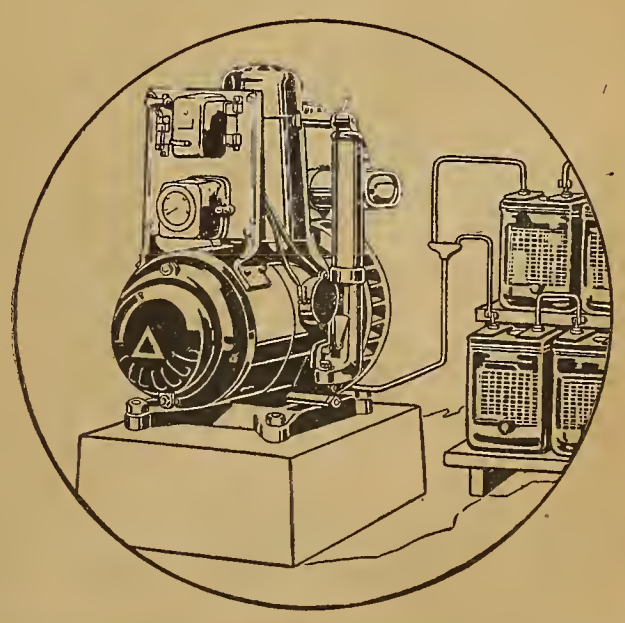
There were five years of hard engineering effort back of DELCO-LIGHT before the first plant was put on the market three and a half years ago.

Today DELCO-LIGHT is furnishing the conveniences and comforts of electricity to more than Seventy-five Thousand farm homes.

It is providing an abundance of clean, bright, economical electric light for these homes. It is furnishing power to pump water, operate washing machine, churn, separator, vacuum cleaner, electric iron, milking machine, and other small machinery.

And everywhere it is demonstrating its wonderful efficiency—and actually paying for itself in time and labor saved.

No Matter Where You Live There is a Delco-Light Field Representative Near You



DELCO-LIGHT

A complete electric light and power plant for farms and country homes, self-cranking—air-cooled—ball bearings—no belts—only one place to Oil—Thick Plates—Long Lived Battery—RUNS ON KEROSENE

The Domestic Engineering Company, Dayton, Ohio

Willard STORAGE BATTERY

Willard Threaded Rubber Insulation

Two Years Ago and Today

The story of a remarkable storage battery invention and what it is doing for Motorists

In the fall of 1917 readers of national magazines read about a new Willard, a Still Better Willard, a Willard with an entirely new idea in battery construction—Threaded Rubber Insulation.

The Still Better Willard was not an experiment—for two years before the announcement a car builder put it on 35,000 cars. Many of those first Willard Batteries with Threaded Rubber Insulation are still in use after four years.

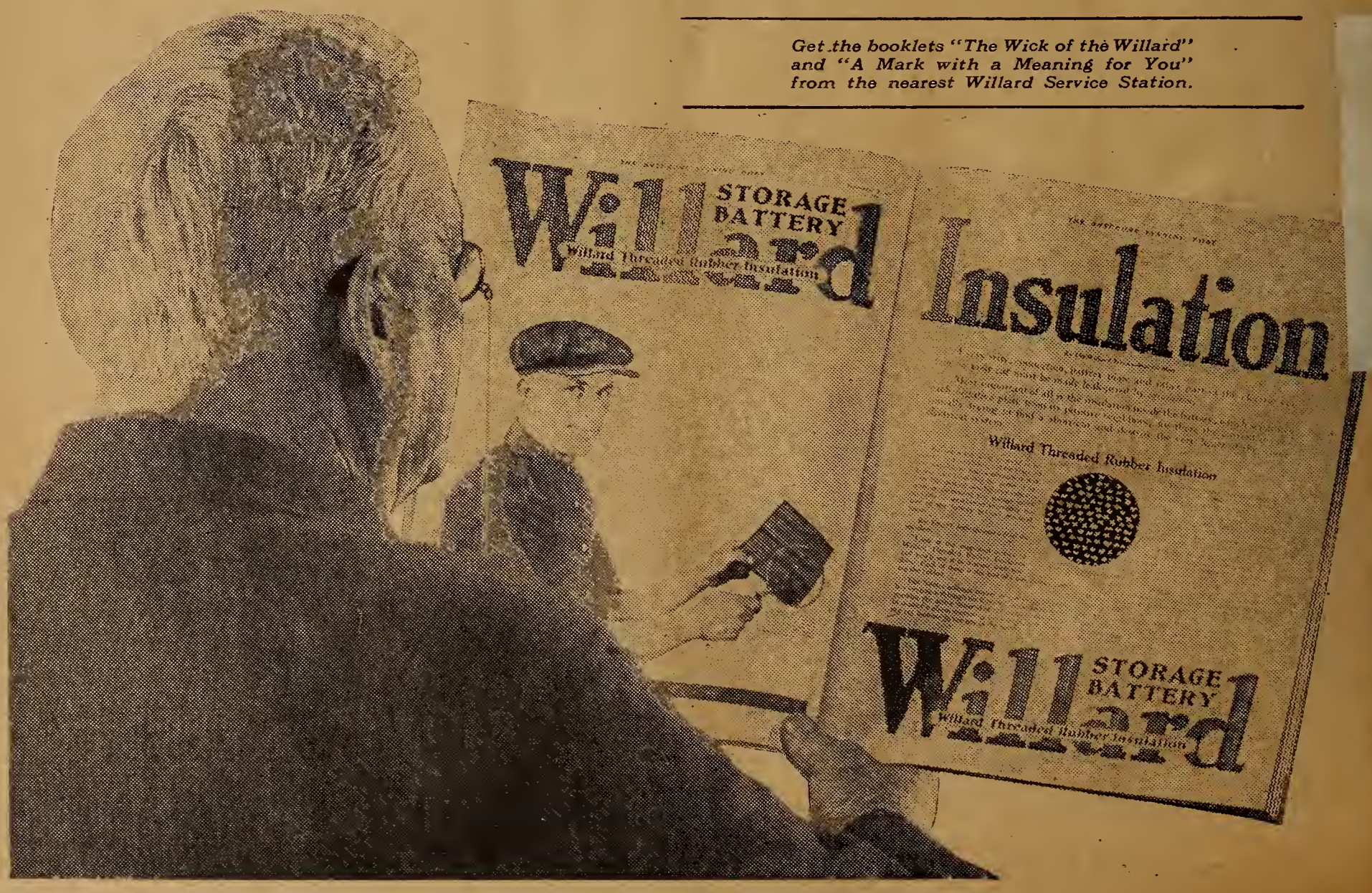
What is the Secret of Threaded Rubber Success?

Insulation had always been the big problem with any storage battery. Ordinary materials wore out before the battery plates did. Re-insulation was bound to come sooner or later, and when insulation began to break down the plates were injured.

But Willard, for the first time found a practical way to use rubber, the one ideal insulating material, by piercing each rubber insulator with 196,000 tiny threads to permit passage of the electrolyte.

You ought to be posted on batteries and battery insulation, so that when you need a new battery you'll be sure of the best your money can buy.

Get the booklets "The Wick of the Willard" and "A Mark with a Meaning for You" from the nearest Willard Service Station.



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What's Wrong With Farming?

By Eugene Davenport

Dean Illinois College of Agriculture

AGRICULTURE, has never figured adequately in world affairs, being regarded by publicists mainly as the source of cheap food for cheap labor, and of raw materials good for commerce and for manufacture, both convenient for holding the balance of trade upon the right side of the ledger. The farmer himself has been generally considered as an unskilled laborer, rather than a typical citizen.

Outside the technical journals, the public press is almost as silent about farmers and agriculture—except for an occasional poor joke, the annual crop statistics, or the market report—as if our farming were done upon Mars.

The columns are full of the struggles between labor and capital, of society notes and of business schemes, but how much does the world know or care about the farmer and his phenomenal success in animal and plant improvement or the pictures he paints every year upon the landscape? Clearly, our public press is animated almost exclusively by city interests, even in cities that owe their very commercial existence and financial support to the agricultural activity of the immediate environs. To be sure, the statistician and the speculator know something about *farming*, but not about the *farmer*, for their interest is limited to the mass results in the form of millions of bushels, and does not extend to the manner of their production, the welfare of the producer, or the effect upon the land.

No thoughtful man can fail to be struck with the character of the economic and social questions that begin to loom large in connection with reconstruction. Not an item, not a suggestion, of anything agricultural either as a business or as a mode of life, if we may except the occasional mention of the word land and certain plans for providing homesteads for returning soldiers, which is an army, not an agricultural, proposition.

A Problem of Public Concern

It may well be said that if there is a dearth of live problems in the public mind regarding agriculture, it is the fault of the farmers themselves, inasmuch as each interest is assumed to be responsible for promoting its own affairs. Granted, but even so the conclusion is irresistible that *people generally really do not regard agricultural problems as of public concern.*

I say that the public is more interested than the farmer in these matters because "the farmer" is actually a collection of individuals who can for the most part extricate themselves from any intolerable situation that may develop, while the country as a whole cannot extricate itself from the consequences of bad agricultural policies that easily develop when matters of fundamental character intimately connected with food production, home-building, and landownership are left to shift for themselves.

Specifically, then, what is it that agriculture needs and does not have that is essential to the highest success and the greatest safety both of the farming people and of the nation as a whole? What are some of the things that must be provided from the national end after the individual, by his education, his industry, and his thrift, has done about all that may be fairly expected of him, and the state he lives in has done what it can?

If agriculture were solely an individual enterprise, we should simply consult the farmer about his needs and desires. But agriculture is more than farming, and the public must be party to any policies affecting the production of its food, the management of its lands, or the social and political welfare of its people. The question, therefore, "What does agriculture need?" must be divided and considered both from the point of view of the farmer and from that of the public in its largest capacity—that is to say, the nation, present and prospective.



Photo by Harry F. Blanchard

Here's One of Many Good Things You Can't Get in Town

GOOD old apple cider, fresh and sparkling from the mill. Gee, don't you feel sorry for the folks in town who have to buy theirs in bottles for 40 cents a quart, and put up with preservatives at that? We used to get all we could carry home in a milk pail for a nickel—and we didn't pay a cent for the luscious sweet cider we sucked through straws at the press.

If this question should be put to the observer from the parlor car he would likely say that the farmer needs to work to better purpose and to be more careful of his equipment; that he doubtless needs more capital, as he certainly needs to organize his affairs according to modern business methods, and to know better than he does what things cost him.

But if the same question be asked the farmer he will have a different answer. He will say that the farmer needs many things which he is powerless himself to provide.

He will probably say, first of all, that he wants better educational opportunities for his children, for as matters stand now they must leave the parental roof at a tender age, or else he must uproot his home, abandon his business, and go to town if his children are not to fall behind those of the butcher, the baker, and the candlestick maker—to be more specific, of the carpenter, the plumber, and the day laborer.

We are evidently headed in the right direction at this point, but our progress will be insufficient until we succeed in providing for the children of the farm as wholesome, as adequate, and as cultural, if not as varied, educational opportunities as are provided in the most favored cities. There are obstacles to be overcome, of course, chief of which are the low tax-paying ability of the open country as compared with the congested city, and the high per-capita cost of instruction.

But if we are to remain a democracy and be safe, this burden must in some way be assumed by the public, and not remain a permanent handicap upon the profession of farming. If it is not so assumed as a national policy, and as a part of a national plan, even to the extent of heavily subsidizing rural education, it is inevitable that we shall ultimately have a peasant population on the farms, and colleges such as ours will have no students of collegiate grade except from among land-holding city residents. It requires no prophet to foresee that when such a time comes democractic institutions will begin to crumble at their foundation.

This farmer will confess that he has long been criticized for tight-fistedness in refusing to pay "decent wages," and that he has thereby lost the bulk of his best labor, even his own sons. He will point out that a federal milk commission very recently, after six weeks' deliberation, refused to allow a price that would net him 30 cents an hour for the labor involved in milk production, even though the same milk was delivered by drivers getting a hundred or more dollars a month, with no risks and no expense.

He will point out how severely he has long been criticized in the press and from the platform for failure to provide bathrooms in his home and modern conveniences for his wife, whom he loves as other men love their wives; but he will also point out that the policy which refused him 30 cents an hour for his own labor permits the plumber in a country town to charge 80 cents (by the latest information, to be exact, 81¼ cents), with 50 cents for a boy helper, who for the most part does little work, and the like of whom would not be "worth his salt" upon the farm.

If Farmers Had Minimum Wage

This farmer will be able to show also that if he should attempt to pay the minimum wage of Mr. Ford, or of the labor unions, with an eight-hour day and time and a half for overtime, now recognized by the Federal Government, he would either speedily lose his farm or else the cost of food would run to a level unapproached by war prices.

If he reads the daily paper, as he probably does, this farmer will also point out that under federal management of the railways his local station agent (not a telegrapher) has been granted a minimum wage of $95 a month on the basis of an eight-hour day, pro-rata addition for two hours' overtime, and time and a half for further excess. And a good farm laborer can do this work; how, therefore, shall the farmer compete at less than 30 cents an hour, and with what arguments shall he preserve the independence and initiative of his own son over against a government job, protected by the civil service, backed by a powerful union, and guaranteed with no investment and no risk, a minimum wage with an eight-hour day and time and a half for overtime, spent wholly under shelter and mostly in an armchair?

The situation is illustrated by my own experience, wherein a farm laborer protested against his wage of $77 a month upon the ground that his son of seventeen was making $165 a month in the railroad yards a mile away.

There are vast wheat-growing regions in this country underlain by coal deposits. Here farming and mining come together. Here the farmer's income from wheat-growing and the miner's wage may be directly compared. When this is done it will be found that the farmer is unable, with the most modern machinery and methods, to cultivate with his own hands land enough to produce a labor income equal to that of the soft-coal miner, working and living in the same neighborhood, trading at the same stores, attending the same churches, and sending his children to the same schools.

Here we have a class of artisans, largely of alien birth and not yet citizens, but protected in their earning capacity by a powerful organization whose existence and demands are now recognized as a part of our national policy. No preparation is required for their business, nothing is invested, no taxes paid, and no risks are assumed, except [CONTINUED ON PAGE 20]

The Girl I'd Marry and the Farm I'd Run If I Were Twenty-one Again

By an Iowa Farmer

IF I were twenty-one again I would do three things: I would go in debt, I would marry, I would take things easy. Yes, and I'm a farmer too. When I was twenty-one I did none of these. I am past sixty now, and have had plenty of time to see and pay for my mistakes. I am also counted successful—and by some, rich.

I know many a successful man—merchant as well as farmer—who will say, "Keep out of debt; it is a millstone about the neck of the man who wants to get



There was a big pile of tin cans over in the corner

ahead!" I used to think that too; I don't any more. When I was twenty-one a mortgage ranked alongside a case of smallpox. One was a disgrace, the other a calamity.

I know a man to-day who stands high in the manufacturing world. He makes agricultural implements, and sells them all over the world. He is a millionaire several times over.

"Mortgage is my middle name," he confessed to me. "I will borrow as much as any man, or set of men, will loan me." It brought back to my mind the saying of the late J. Pierpont Morgan:

"A millionaire is not so much the man who *has* a million dollars as the man who can *raise* a million dollars."

I would marry young, because there is nothing that helps a man to earn more and to save more than a good wife. A good wife is always to be desired, even above great riches; but she is worth two dollars on the farm for every one in the city. For just as earth keeps a plowshare bright by constant usage, so does the right kind of farm life keep real true love bright.

I would take things easy, because that is a good rule in any line of work. I believe in being always about two rods ahead of the job, never to let it rush me.

I once heard a successful business man say that he could tell whether a man had administrative ability or not by the way he kept his desk. If it was free from papers and looked as though the owner didn't have a thing in the world to do, he knew the man was a hard worker and had great administrative ability. If it was crowded, untidy, wearing a sort of "I can't possibly get it all done to-day" look, he knew the man was a failure.

There's a lot to the theory—especially in the case of the farmer. Nowadays, with labor-saving and time-saving machinery for almost everything a farmer has to do, there is not much excuse for overworking.

I want to set forth my ideas on these three matters—debt, marriage, and work—at a little greater length. Taking marriage first, I am going to cite two cases right here at home, on two farms worked by hired hands. I visited both of them the other day, and as I rode homeward I thought about the wives of these two hired men.

I had stopped at the farm worked by Smith, and, as I never like to appear like a boss or as company, I walked around to the back door. Before I knocked I looked about me. The yard was littered up, weedy and unkempt; there was a board out here and there in the walk between the house and the outbuildings. The garden was full of weeds; the poles for the beans leaned every which way. But, the worst of all, there was a big pile of tin cans over in one corner—canned fruits and vegetables of all kinds. Think what that means, in the very garden spot of plenty, where everything that those cans represented is grown in profusion and might have been canned by the woman, if only she had been the right sort. "Tin-can poverty." There it was.

I knocked, and walked in. After passing the time of day I asked the woman how her poultry was doing. She replied she was through trying to raise any poultry on the shares, as it would take all she raised to make up the original number of breeders. I asked her how she was coming along with her canning, and she said she did not have anything canned, and was not going to can anything; for it would all spoil in moving, and they did not intend to stay in the country unless wages were better.

I stayed a while, and this woman sat on her doorstep and told me her whole history and that of her husband, and how hard it was for a poor man to get ahead.

At the other farm, Mrs. Jones bade me enter with a cheery voice, and kept on working while she talked. She had four little ones and she was washing out their clothes that day. After a few remarks I asked her what she did with her tin cans, and she replied that one of the children had been craving sliced pineapple one day (we don't raise them where I live), and she had bought a small can of it; but aside from that there hadn't been any canned stuff.

"I went over to Mrs. Smith's the other day and got some old cans to make flower pots out of," she concluded. "I do so love flowers around, and think they have a refining influence on the children."

I asked her about her chickens. She stopped her washing, threw a bonnet on her head and said:

"Come out here, I want to show you some chickens!"

Well, she had 76 Buff Orpingtons in the spring. She had kept us in eggs all summer, and she had over 400 chickens when I called.

Now, how am I—twenty-one again—to know which one of these two girls to marry? I believe I'd arrange to get to eat a meal or two at her home; I'd listen to hear if she sang at her work, and whether the song was "Beulah Land" or "Brighten the Corner," or whether it was "Oh, You Beautiful Doll!" or some of these raggy-jazzy pieces.



She had four little ones, and she was washing out their clothes that day

If the meat and the vegetables were well cooked—don't bother about the pies and cakes, at first—and the table served quickly and unobtrusively, without any waste motion or complaining, if the girl never fussed and fumed when her little baby sister cried or her big brother jollied her a bit too much, I'd say the word that night, no matter whether I was twenty-one or twenty-five, or whether I had a cent in the bank or owned an acre of land.

Marry the right girl—that's your first long step toward happiness and success.

Now, as to going in debt: All my life I have been a firm believer in borrowing. I figure that in my business I have two partners—my wife and my banker. I have always consulted both on every deal I made.

I have even borrowed money, paying six per cent for it, when I had plenty of money lying in the same bank, drawing only four per cent interest. Why did I do this? For two reasons: In the first place, I never like to disturb a nest egg—and that's what a savings account is. In the second place, I worked and saved harder to pay off the note than I would have if I had not borrowed.

Bank credit is largely a matter of personal character. I know men who do not own a foot of land, not even the house they live in, and they can borrow as much at the bank on their personal note as some farmers owning 160 acres clear. These men of good credit never avail themselves of the three days of grace; they either pay or renew their note the very day it is due, often a few days before. They stop in at the bank and chat when they have no favors to ask. I never go to town without stopping in at the bank. If the banker is busy, I do not waste his time; but I let him see me and know that I'm still on the job.

I have never used my personal credit to indulge in extravagances. For any other purpose I borrow, and tell the banker what I am going to buy. Some folks say, "It's none of the banker's business." All right; there's a limit to their credit, and there's practically no limit, within reason, to mine.

I have made it a habit for a good many years, of investing $1,000 as soon as I had $500. I borrow the other $500, and then save with might and main until I have that amount to pay back to the bank.

I am not a plunger. I have kept from $500 to $1,000 in the bank, in certificates of deposit, for years—never touching it. A man never knows when sickness, death, or some calamity is going to make it imperative for him to have ready money. By withdrawing it I lose all the interest accumulated since the last interest-paying date. That is why I do not touch it when I need money temporarily. Let me show you how it works out:

Supposing I need $1,000 for sixty or ninety days, and have $1,000 in certificates of deposit in the bank. This money, we will say, has been there five months. At four per cent interest—which the certificates draw—there is coming to me, at the end of five months, $16.67. If I draw out the money, however, before the six-months period is up, I lose this amount. All right, I go to the banker and borrow $1,000 for sixty days. My interest on that note at six per cent, for sixty days, is $10. I am $6.67 better off than if I drew out my own money. Even if I borrow for ninety days, the interest at six per cent is $15. I am still $1.67 better off.

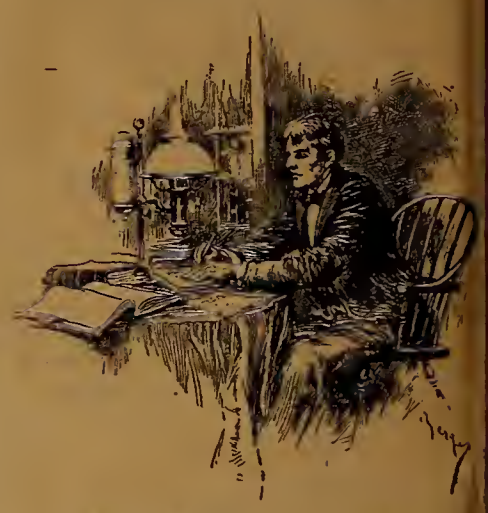
I was not yet thirty when I learned that a lead pencil and a pad of paper will make and save much money. Figure things out; study percentages, or get the children to explain them to you—nothing is more important for success, either on the farm or in the city.

Now as to the third statement: If I were twenty-one again I should not work so hard. How, then, would I expect to get ahead better than I have done? I would let machinery do the drudgery.

When the late David Rankin, known as "the world's largest farmer," was asked to tell the secret of his success (he began by borrowing $6, and died worth $5,000,000, all made in farming), he answered: "Success in farming consists in making every minute, every cent, and every seed count. A good workman is cheap at most any price, and a shiftless, careless man is dear if he works for nothing." Before he died Mr. Rankin amplified his views: "To make a profit the farmer, just as any other manufacturer, must reduce the cost of production," he said. "I saw this long ago and when I saved a hand's wages by the use of a new piece of machinery I felt pretty good; that was making money for me. We farmers must not only keep eternally reducing the cost of production, but also plan a way *to get the most out of our product.*

Mr. Rankin's life was a constant practicing of what he preached. Over sixty years ago he conceived the idea of putting together two of his double shovel plows to plow on both sides of the row at once. He explained his ideas to the village blacksmith, and his was the first straddle-row cultivator, so far as any records go.

I do not have the inventive genius that David Rankin had; nor do I need it now.



I was not yet thirty when I learned that a lead pencil and a pad of paper will make and save much money

I can avail myself of the other fellow's genius in almost every detail of farm work.

Nothing interested me more, at our last state fair, than an exhibit showing how four or five cents' worth of electricity will do any one of the following chores around the farm: Separate 1,400 pounds of milk, churn 20 pounds of butter, do two large washings, clean all rugs, sharpen an ax or scythe six times, pump enough water to last a family two days, run the sewing machine six hours, light a 32-candlepower lamp an hour a day for five days, and many other things.

A good idea of the amount of work a small motor will do on the farm can be had from this: Six horsepower will drive a grain separator and thresh 2,500 bushels of oats in ten hours. Three horsepower will make 6,000 pounds of milk into cheese in one day. Six horsepower will grind 20 bushels of corn an hour. Five horsepower grinds 25 to 40 bushels of feed or 10 to 12 bushels of ear corn an hour. Seven horsepower drives a 18-inch separator, bur mill, corncob crusher, and corn sheller, grinding from 12 to 15 bushels of good, fine meal. Twelve horsepower will run a 16-inch cutter and blower and elevate the silage into a silo 30 feet high at the rate of seven tons an hour.

Do you think I am going to work very hard when the electric motor will do all this for me, especially with the feed wire running right past my door?

But when I say I would take things easier, I am not thinking of relying on machinery altogether. I would systematize my personal efforts so as to make my time count double.

I know a rich man who says the first time he realized he was wealthy was when he ordered from a menu without looking down the right-hand side of the card to see what things cost. The first time I realized that I could do a lot was when I learned that I couldn't do everything. Don't learn to depend on others, but realize that others are necessary. If you find it to be a fact that you can do some one thing better than anything else, turn the other work over to others.

There will be some, I doubt not, but will say that I am a silly, visionary old man trying to give young folks advice. But my neighbors will say that I have made as success as it is. I have a fine, big farm, a fine modern farmhouse. I enjoy most of the comforts of rural living. And my experience has proved that what I have said here is *right*

Eight Big Points to Watch in Selecting and Caring for Your Seed Corn

By Eugene D. Funk

ONE day a letter was brought to my attention wherein a farmer was complaining about the seed corn he bought from me. Dealing with 65,000 farmers every year, we get thousands of letters; but, somehow or other, I think of this one every time I start to pick the seed for the following year.

"The seed you sent me," he wrote, "is more like popcorn. I want corn for my live stock, not to pop."

I laughed when I read this, but I have been thinking over those few lines ever since. His was a very natural mistake. If he had noticed in his own seed in other years that the well-shaped kernels he picked for seed in the early fall were greatly reduced in size by spring, when he shelled the ears for the planter, the kernels would look like pop corn if he had properly taken care of his seed during the winter.

When I go into the field in the fall to pick seed corn, I like to think of how important it is, and of the bearing the seed I pick has on the crop of the next year.

And when the seed has been picked and hauled into the seedhouse for sorting preparatory to being hung up for the winter, I am reminded of a horse race. I have seen many a horse best the starter, only to lose the race later on because he failed to hold the lead; and I know of instances where good seed corn, improperly handled during the winter, has failed to produce the expected crop the next year.

Each ear we keep for seed, out of what has been brought in, is a good ear—in shape, kernels, rows, etc.—but after the ear has been dried, and shelled in the spring, the well-shaped kernels will be a little shriveled because of the reduced moisture content.

It is because of the appearance of the kernel, with 9 to 10 per cent of moisture out, that this man thought the grain was popcorn instead of field corn. Ears picked for seed corn will always shrink an inch or two, depending on the amount of moisture in them when picked.

Human nature is something all business men must observe. We are able to study it through letters, and it is upon the information contained in them that we base our campaign of education relative to corn-growing, selection and preservation of seed.

I firmly believe, as a result of twenty-seven years' studying corn-growing, that every farmer should change his seed every few years, for the same reason that a breeder changes his bulls. He should not get a whole lot of seed, but merely a few bushels—enough to plant in a special seed-corn plot. And he should give this plot the best of care, and from it select the seed for his next year's crop.

This means a little extra work, and may sound impractical to some; but when you consider not only the increase in bushels per acre, but also the quality and maturity of the grain, I find it pays for the trouble. My files contain thousands of letters from good, practical farmers who are doing that very thing. Many of these men have increased their yield 15 bushels an acre by the adoption of this system.

Seed selection is a difficult proposition. It is impossible to study every stalk in the field in order to select from only the healthy ones. Moreover, this can't be done, because there is a disease in corn—a kind of smut, known as *Fusarium*—which, in many instances, it is impossible to detect outwardly, for it may attack the corn in nine or more places.

The only way is to select the best-looking ears—that is, ears that are well shaped. Diseased ears may be selected unknowingly, as corn has disease just like live stock. I would say that the corn crop of the United States is reduced 20 per cent each year because of disease.

Every State where corn is grown has it. We have made a careful study of the situation, and government investigations have checked what we found. *Fusarium*, we find, is the most prevalent disease. It attacks the plant in the ear, roots, stalk, leaves, and other parts. Moreover, this disease may remain in the soil for years, and attack succeeding crops—not only of corn, but of wheat.

There are some visible signs of this disease, such as corn which has fallen, or moldy ears. These are extreme cases, but not every stalk which is down has *Fusarium*. It can be discovered in the germinator too, but the next kernel may be healthy.

One way to satisfy suspicion of *Fusarium* when it is in its most violent stages is to slit the stalk. The internodes will be as black as your hat. If the corn has fallen down, the roots will be rotted. This condition may be reached at any stage of the growth of the stalk. We haven't devised any way of treating for *Fusarium* as yet, but we are working on it.

The time to pick seed corn, I find, depends upon the season. Offhand, it may be said that I pick my seed when it is in the best stage of preservation. I would like to have corn ripen in the field, if I could depend on the weather, because nature is hard to improve upon.

I aim to pick corn when it is ripe—that is, hard. This is just before it freezes. A hard freeze will affect the vitality of seed corn because of its moisture content. When the moisture is 18 per cent or below, I have found, there is not much need for worry over the danger of freezing in the field.

It has been my experience that the average time to pick corn for seed is about the middle of September. Corn at that time will have from 22 to 25 per cent of moisture, if conditions are average. If it is an abnormal season the moisture content may run as high as 35 per cent. This is the time for alarm, because a freeze will affect the germination very materially.

I have found that freezing corn, when it has such a high moisture content, may not kill the germ, but it will weaken it, and the crop next year may not be very good. Take the present year, for instance: A short time after we planted some of our corn I looked at the thermometer we have for registering temperature of soil and atmosphere. The soil was 48 degrees, and the atmosphere something like 65.

These conditions are not ideal for growth of the tiny germ, and considerable of the early planted corn this year will be somewhat stunted. It will produce, but not so well as if conditions had been favorable. It is with corn just as it is with a pig: once you stunt him, he may recover; but he will never be the same good animal.

If the moisture content of the corn gets down as low as 15 per cent, no freeze, no matter how hard, will have any serious effect on seed vitality. However, in our warehouse we don't allow the temperature, even during the coldest part of the winter, to get below freezing. *Don't let your seed corn freeze*!

After picking our seed corn we dry it to reduce it to 15 per cent moisture content. The average farmer can do this by taking corn into the house and hanging it where his wife doesn't want it—around the stove; or he may hang it in a room above, where there is some heat and a good circulation of air.

The best place to store corn for the winter is where it is dry, and with plenty of air circulating. Corn should never be piled up, but hung so the ears do not touch, and there is room for a circulation of air between the ears or rows.

I have observed that more seed corn has been ruined by not caring for it properly than in any other way. Proper care during the winter is very important to obtain good results.

Our corn in the warehouse gets down to 9 or 10 per cent moisture by spring.

I have often seen seed corn hung in the eaves of the barn, up over the horses, or in the runway of the corncrib. These places are highly improper to store seed corn. There is more or less dampness always coming in with the air from the outside, and the ammonia from the manure. In ordinary years it might be all right, when the corn has only about 18 per cent or less moisture. It will grow under those conditions, but not so in abnormal years.

I figure three out of every ten years are abnormal, and I always want to be prepared. Safety first is a good motto when it comes to handling your seed corn during the winter months. It often spells the difference between profit and loss.

I don't know of anything in the way of seed that absorbs and gives off moisture more readily than corn. Naturally, when corn absorbs moisture the small germ swells, and when it gives off moisture, naturally it contracts. This takes place during the freezing and thawing weather. This expansion and contraction soon break down the tissue in the germ, and weaken it very much.

The most economical way to hang a small amount of seed corn is by stringing it on binder twine, twisting the twine so the ears will not come together. Strong twine should be used.

I have found from experience that the farmer selects an ear for seed because it is well shaped, good sized, and has well-filled butts and tips. He doesn't know if this is the highest yielding corn in the field; he merely uses his judgment by picking the best-looking corn.

I am president of the National Corn Association, and this organization has staged six expositions and corn shows in various parts of the country, for the purpose of teaching better methods of production. At these expositions the best corn has been judged according to the score card.

Naturally, the physically perfect ears took the prizes. At times I have planted seed from the prize-winning ears against ears which would not win a prize because of their shape. The ribbon ears never yielded as well as the other. In fact, I have never been able to get corn which rated high according to the score card that would make a big yield in the field.

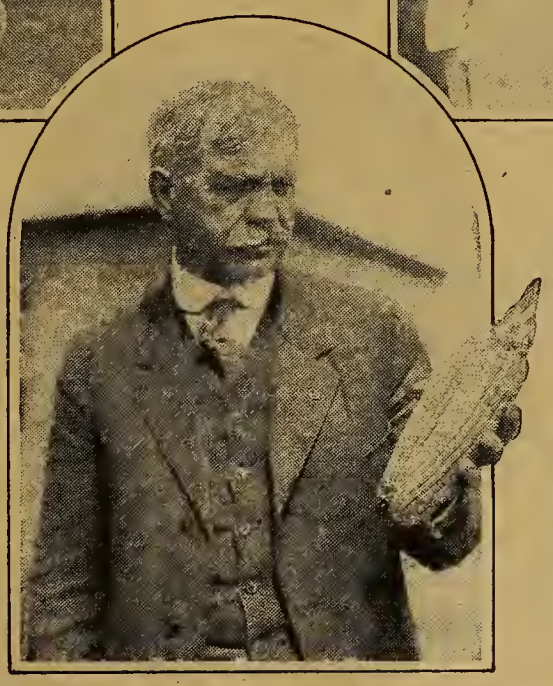
The selection of the best physical ears does not mean anything to the scientific breeder, because they don't give an inkling of the yielding power.

Another way of explaining the matter is to liken the purchasing of a dairy cow according to appearance and paying no attention to her [CONTINUED ON PAGE 22]





Mr. and Mrs. Funk and their two little girls. Also some samples of the kind of seed corn Mr. Funk tells about in this article.



EVERYBODY who knows corn knows Eugene Funk. He is a member of the celebrated Funk family of McLean County Illinois. Eugene Funk is in charge of 25,000 acres of the Funk estate, and he uses 8,000 acres of that to grow seed corn.

There are 65,000 regular customers on the Funk seed-corn list, and the seed is shipped to every part of the world. The Funks started corn-growing in Africa, the crop there having originated from their specially grown seed for that country.

Eugene Funk is about fifty, and the proud father of eight children. He is also in the hog business with his brother Lawrence. They market about 10,000 hogs a year. Funk was one of the first men Herbert Hoover asked to join his committee of farmers in the Food Administration when we entered the war.

THE EDITOR.

Here Are the Points in Brief

1. Get only a few bushels—enough to plant a special seed-corn plot. From this select the seed for the succeeding year's crop.
2. Pick seed corn in the field when it is ripe—that is, *hard*, just before it freezes.
3. Pick a medium-sized ear—not a big one. Large ears mean late-maturing plants.
4. Don't pick an ear from a hill which has smut in or near it.
5. Don't let your seed corn freeze. Store it in a warm, dry place where plenty of air is circulating.
6. Don't pile up the ears. Hang the corn so the ears do not touch.
7. Test your seed early enough so that if your corn does not show good germination you will have time to get and test new seed.
8. Change your seed corn every few years for the same reason that a breeder changes his bulls.

EUGENE D. FUNK.

Two Mistakes We All Make in Starting Our Children Through Life

By Joseph E. Wing

IN MY last article I told you something about soil fertility, and the importance of building it up on your farm, and *keeping* it up.

In this article I am going to tell you two things about building up children—two things which most of us do *not* now do, but which are both vital if you and your children are to be happy and successful on the farm.

The first thing is so absurdly easy and simple that, like the idea of carbonate of lime underlying all soil fertility, it may seem to you so small and unessential that you will wonder, and yet it is the most tremendous proposition that I know how to advance, and if it can be accomplished it will revolutionize all society, just as carbonate of lime will revolutionize all sour soils. That proposition is this:

That your child shall be taught to hold an ever-reverent attitude toward all of God's world and all the creatures on it, including animals, plants, children, men and women, of every race and nationality.

I think here I can see men inwardly objecting: "Is such sentimental and unpractical stuff as this what the man from Ohio has to give us?"

Sentimental? Not at all. Unpractical? No; the most practical of ideas, this, and the thing of greatest need of anything in America to-day. I would put this proposition ahead of that of carbonate of lime if I did not think that it would be quite difficult to carry it out unless we first laid the foundation of material prosperity, for money is needed in everything, always.

What do I mean by reverent attitude toward God's world and its creatures? Let me illustrate: One day in old England I wandered along a footpath, through a field of wheat, nearly ready for harvest. It was splendid wheat. The owners of the soil had held it in reverence for centuries. The footpath was common property of the dwellers in the old city of Salisbury. Thousands of feet trod this path—feet of rich and feet of poor. No fence limited the path. One could stray into the wheat as far as he pleased. And yet the wheat grew tall, straight, and unharmed, to within a foot of the path. It was a little lane, not more than three feet wide, through tall wheat. No one would pull off the heads, no one would step on the young "corn," as they called it, because of that reverent spirit they held, first for the earth itself, for the beautiful growth springing up on it, for the rights of the owner of the soil and crop.

"The law made them do that," I hear some one whispering. Not at all. It is probably true that the law of England is more carefully enforced than is the law in America, but it was not fear of the law that made little feet respectful in the midst of a great wheat field where no eye but that of God could see. It was merely that from infancy these people had been taught reverence—reverence for plants, reverence for animals, reverence for others.

Let's go on further: Up on the hillside above the wheat field was a great pasture. There on that Sunday afternoon went many people, young and old, grave and gay. In little groups they sat on the grass or beneath the great elms. Sheep fed in the pasture. Children wandered about picking flowers, and now and then they would run up to feeding sheep and give them friendly pats on the head. The sheep merely looked around inquiringly, and maybe took a step or two away, then resumed feeding. There was perfect understanding, you see, between child and footpath, child and pasture land, child and animals grazing there—respect and appreciation for each one.

"How are you to teach reverent appreciation?" I hear you ask. It is born within us, I think. What we need only to do is to see that it is not *lost*. Let me illustrate again:

A woman in our village planted in the grass in front of our little church certain bulbs that pushed up in spring, flower shoots that then unfolded buds and bloomed out in gay little blossoms starring the short green grass. Certain small children came up the street one day as I happened to be near. They spied the flowers and exclaimed. They ran eagerly to look at them, smiles dimpling their faces. Then they knelt down, put their little noses in the blooms to enjoy the fragrance, laughed, arose, and trotted gayly away.

Not a thought of destroying one of them; already in these little minds bloomed love for the beauty of flowers, admiration, eagerness to know more of them and reference for them. They would not step on them, would not pull them to pieces or mar them, would not pluck them, because some instinct told them that they were in a manner *sacred*, that they could love them and enjoy them but must not take them away, that these flowers belonged to them, bloomed for them, yet bloomed and belonged to others as well.

Now, take those little children, who instinctively loved the tiny flowers, who instinctively went to them and knelt before them and buried their little noses in them, and then went away having done them no harm—take those little children, I say, and give them teaching that shall carry that spirit right up through their young lives, always reverence for whatever God has made, be it of plant or animal life or what, and all things good are possible.

I repeat with all possible emphasis that this spirit of interest, pleasure, and reverence is natural to childhood, and it is we, the elders, who ought to bow down in deep humiliation and hide our heads in the very dust; it is we who by our word and example destroy this spirit of childlike respect, love, and reference for all that is good in the world that God has made.

Who told that child that the man of black skin was a "nigger?" Who told that child that this other man from Italy was a "dago?" Would the child have learned that unmerciful scorn that has made hatred and envy and misunderstanding come into human life without *you?* Is not the instinct of the child that sees kindliness and certain goodness in the negro, that despises not the Italian or any foreigner, is not that feeling the true one?

Is it not all wrong that we should feel scorn of the man who is simply different from us, who has lacked the opportunities that we have, or whose virtues happen simply to be different from ours? The spirit of contempt is *never* born in a child. You father, you mother, you older brother or sister, taught that to that child.

Why can't we get back to simple reverence once more? It would solve all the race questions, all the social questions.



Joe Wing loved to work, even at writing, out in the open. He abhorred being indoors, and never stayed there unless compelled to.

Don't misunderstand me by hastily assuming that I believe in "social equality" or any such thing; I do not. I see no such thing as equality anywhere among men, but I hate injustice, I hate prejudice, I ask only that the little child be taught to carry through all life its first grave, happy, reverent interest and appreciation in all goodness wherever it is seen.

Who taught that child that bats are to be feared, that they carry bed bugs under their wings? That is a lie. Who taught fear to the child? Who taught it to kill things, to rob birds' nests, to torture animals, to uproot plants, to be a vandal wherever it went?

We have not time, or else we have not ourselves enough goodness to be fit to be comrades with these little ones and simply lead them up along the path that their little feet are born naturally to tread.

Now comes the "final," which you are all wishing to hear. Perhaps it is as essential as anything else that I have discussed. *It is to encourage and develop in the child from infancy up an inquiring mind and to give it a hand trained to work.*

Naturally your child has an inquiring mind. Children crave education—true, real education, the learning of the secrets of growth, the way things are made. They desire exceedingly to know things. Don't they dig up seeds to see how they sprout? Don't they take their dolls and playthings apart to see how they are made? That is the instinct of the true student; discourage it not. Direct the young mind; do not repress it. Accept the little child frankly as an equal, embarked on the same journey of life as yourself, interested as you are in nature and all things pertaining thereto.

Talk to the child as sensibly as you would to an older person. Marvelous is the mind of the child, marvelous the ease with which impressions are made, marvelous the staying qualities of those impressions. There will be absorbed in early childhood tendencies toward thought, tendencies toward research, tendencies toward opinions and convictions. Rightly led, these will all be along natural, true, helpful lines.

The brain of the child is a white tablet on which you may write. It is a mass of molder's clay. It may be shaped easily into almost any form. It is a twig that may be bent with ease, but that, once bent, is very hard to straighten again. The direction of thought of the child during its earlier years is nearly sure to fix it for all life afterward.

A Chinaman once said to a friend of mine who employed six hundred of the Chinamen in California: "You wish to know how Chinaman knows how to make things grow? China boy's mother, when China boy so long" (indicating with his hand a lad about two years old), "takes box, fills box with earth. China boy plants seed in box. Soon China boy waters seed. Soon China boy's mother help China boy dig up the seed and see the little sprout grow, see little root grow. China boy plant seed again. Some day seed come up. Then China boy's mother helps China boy put the little plant out in the garden. China boy's mother shows China boy how to dig about it and fertilize it and water it. China boy's mother make China boy look at plants to see how they grow. Bimeby China boy be farmer."

And of all agriculturists in America the Chinamen are most *skillful*. They take deep interest in their work. They are careful students of soil and fertilization. Professor King, who has been to China, says he gets down on his knees before the Chinese farmer; he has nowhere seen greater skill, greater knowledge of soils. And, evidently, nowhere else has there been nature study and training in the elements of agriculture earlier begun or more persistently and intelligently carried out. Yet we in our ignorance affect to scorn and despise the Chinese people. They can teach us profound lessons that, once learned, will make us a wiser people, a better people, a happier people.

So far as I have seen, about the only real practical schools in America to-day are the kindergartens. My child grew more in mind and judgment while in the kindergarten than ever before or since.

Our education in schools is superficial, unrelated to anything that the child knows in outdoor life, unrelated to anything else except other studies that it may possibly learn in the dim future. That is wrong education. It is not education in the true sense at all—it is cramming. Education is something that takes a boy and develops him to do things.

Education is what *comes out* of the child, not what *goes into* him. It is education when the child learns to know the vital facts underlying the earth, the plants, the animals, the men about him; education when he can do things with his own hands, when he can take a block of wood and make it into a thing of use or a thing of beauty.

It is education when he can saw off the end of a board and can saw it square; when he can measure with his eye and mark off sixteen feet; when he can plow a straight furrow and, as he plows it, remember what the soil is that he is turning up, know something of its geology and somewhat of its chemistry, and somewhat of its bacteria flora. It is education when he can do well some useful, elemental work of the world. The child should know how to do things well with his own hands, with her own hands. The child should be trained to *work*, to *think*.

To do all this it will maybe be necessary to remodel our whole scheme of education. It is top-heavy now, unpractical, mischievous, much of it [CONTINUED ON PAGE 5

Tricks and Tackle I Use in Fishing for the Bold, Bad Black Bass

By Warren H. Miller



The author tending strictly to the wriggle of a pork minnow

WE ONCE had a dinner at the Angler's Club, where the entire evening was devoted to extolling the virtues and fighting qualities of the black bass.

In our midst sat an English guest, spellbound, listening to the tales of the prowess of this king of the lily-pad lakes. Bob Davis, of "Munsey's," who is no doubt as keen a fisherman as ever almost caught a bass, was lauding a many-barbed plug that would catch anything in the bass line that wore fins.

"And you can slam it through the shingles of a barn and hook a cow with it!" concluded Bob, dropping the plug on the banquet table amid a tumult of applause. The Englishman arose, deeply impressed.

"A most extraordinary fish, this bass, doncherknow!" he averred. "I should like to know where you get the scales to weigh such a marvelous creature?"

"He has them too, right with him!" shot back Davis, and sat down, leaving the Englishman slightly puzzled.

Bass fishing is a great and universal summer sport, at its best in June and September, and poorest in late July and August. Pike and pickerel fishing is much like it, and in the same waters. Both pike and pickerel are surface fighters, usually coming to the boat in a squirming mass of yellow and green, and their fight is soon over.

But if there is a lily-pad pond anywhere near your farm, where there are bass, better get an outfit and try the sport. One way to get there, worked out by a farmer friend of mine, is to make a trailer for your car out of an old pair of wagon wheels and a tongue. On this a light boat is lashed, and the tongue tied to the frame of the car. With it every pond in the neighborhood is his fishing ground.

The black bass is the most widely distributed of all our game fish. From Florida to Maine, and from the Atlantic to the Rockies, there is not a pond in the farming districts that has not its share. You and I love a good fighter, and here is an antagonist that will break any tackle, outside of a cane pole and a clothesline, that you care to match against him.

There are two sporting ways to take him —with a six to eight ounce fly rod, or with a five-ounce bait-casting rod, the lures being bass-sized flies, plugs, or live bait.

Your battles with him will be staged under the roseate splendors of the setting sun, with the clouds in the firmament a glory of lavender, purple, and gold, and the surface of the lake a still mirror, burnished with living color, each lily pad and ragweed a note of silver in the symphony of the dying day.

Or else it will be in the mists of early morning, with the green woods along shore and the distances of each cove veiled in a haze of sweetness, resting tranquilly on the silent bosom of the waters. At such times and places you ply your rod, or cast the deft plug, while the boat drifts idly over the green depths. There is neither pleasure nor profit in fretting your soul after the sun is well up and the lake a chop of wind-driven whitecaps. During the time from ten to four let the greenhorn use his day trying to entice the bass when they are not feeding. Except for bait fishing in an anchored boat, the broad daytime is hardly worth while as a fishing season. But betimes in the morning, or after four o'clock, Sir Bass is out for what luck may befall.

He is a fighting fish. Everything in the lake is afraid of His Finship, and he knows it. The outlandish plug and the leathern wooden minnow are but new enemies for him to attack, and that is the real reason why they succeed. Anything moving, struggling, or wriggling in the water excites his sudden ire. The smaller bass are apt to fear your well meant attempts to bean them with a wooden minnow. They will chase it, and rout it valiantly; but pounce on it with the smashing strike of the two-pounder—never! For them I have had the best success with the fly rod and a Silver Doctor, an Ibis, or a Montreal; for a fly on the surface is part of their natural food and, if artfully presented, will not be overlooked.

With bass next in size, say around a pound to a pound and a half, I will take three to one against the plug, with a small spoon or pork rind, skittered from the shore line out, with a fly rod. If this spoon has a short gut leader of some three feet in length, severing all visible connection between it and the line, it will be a thousand times more effective in deceiving the doughty bass. Gut is invisible in water.



Pike and pickerel not to be sneered at

Then, in the realm of the big fellows, those from two to four pounds, the pork chunk—man's food—or a diving wiggling contraption that performs insane antics as you reel it back to the boat will bring the leonine pounce that will send the blood pumping wildly to your head, set your nerves a-tingle, and put you on your mettle as a fighter against a fighting fish.

Again, as the bold, bad black bass has his moments of indolence and lethargy, there are days, particularly hot, still, sunny ones, when he will strike at nothing, and you must go down after him with live bait —the small green froglet, the agile angleworm, the peevish crawfish, or the nettlesome helgrammite.

A brief outline on the accepted tackle for fly and bait casting, and how to use it: The fly rod for bass should be somewhat heavier and stiffer than that for trout, say six or seven ounces, and nine and a half feet long; a heavy (size E) oiled silk line, preferably double-tapered; a reel to hold it; a short gut leader; some No. 1 spoons with feathered treble hook, and the assortment of bass flies, tied on No. 6 hooks—Royal Coachman, March Brown, Silver Doctor, Montreal, Red Ibis, and White Miller—and you have an outfit for either fly fishing or skittering.

The casting is done as in fly fishing. It is rather hard to tell how to do it, but you sit in the boat, strip off a yard or two from the reel with the left hand, and lift the rod tip smartly, stopping it when it reaches perpendicular. The line already out, say fifteen feet of it, will fly back horizontally until it bends back the rod tip. When this bend is over and the tip is coming forward again, you aid it with a cast from the forearm, at the same time releasing the two yards of line in your left hand, which shoot out through the guides. When the whole business straightens out in front, and is about to settle on the water, lift it back smartly, taking more line off the reel with your left hand as you do so. Repeating the maneuver several times will get out some thirty feet of line, and then you let your fly settle gently on the water. Jiggle and work it a bit with the rod, and, if not taken, lift it smartly and drop it in another likely place.

Avoid rippling the water in starting your line back.

In skittering, about twenty feet of line is all that can be managed properly. Work the boat along some twenty-five feet off shore. Start the cast on the offshore side of the boat, flicking the spoon across and landing it near shore in some likely cove, rock crevice, old stump, or other bass lair. Work it slowly back toward the boat with the rod tip, making the spoon wiggle and twist, to imitate a minnow turning over and over in distress. A small piece of pork rind is also effective, used in this way.

In bait-casting the whole scheme of tackle changes. The art is a development of the old stunt of hurling an apple off a pointed stick. The pointed stick is replaced with a five-and-a-half-foot, five-ounce bamboo or steel rod, and the apple by a lure weighing not less than an ounce. A light, braided silk line, of about twelve pounds' breaking strength, wound on a free-running, quadruple-multiplying reel, furnishes the connection between the apple and the stick.

The reel is the most important item. A good one should run 26 to 30 seconds on one spin without stopping, and must have strong, simple gears that a big bass cannot strip. If it has jeweled bearings, so much the better. The line should not be too heavy or strong, as a thick line is hard to cast accurately, and unfair to the bass. Too stiff a rod requires too much arm-play, and makes for backlashes and inaccuracy in casting.

With such an outfit you are fixed to cast 60 to 100 feet, with an accuracy that will land your lure within two feet of the chosen spot—and accuracy is all important, for a big bass will not come far from his lair to strike at your offering. The boat is worked along the shore, or along the outer fringe of the lily pad, about 40 to 50 feet away from them.

Take all the time you need to make at least two casts into every likely dent and cove. Each one of these is apt to be preempted by some one particular bass, who is boss of all that region. Here he lies in wait for frog or minnow which may venture near, ready to pounce out on them like an ambushed leopard. Now, if you can flop your lure right into his lair, it is an affront that no self-respecting bass will endure, and his return strike will be made with a fury that will blow up your self-control unless you have it well in hand. I've seen men go all to pieces on a savage bass strike, grab frantically for the line, and strive to haul it in hand over hand. Needless to say, the line parted and the bass ran off, snorting with derision, and finally leaping out of the water to hurl the plug from his lips with a savage shake.

Keep cool, and play him on the reel, not trying to horse him, but making him fight for every inch of line dragged out from under your thumb, snubbing him with the full strength of the rod when he tries to dive for roots and rock crevices to snag your line, reeling in slack when he rushes for the boat, and hauling him down with your rod tip when he leaps high out of the water in his mad efforts to shake out the lure. When finally good and tired, it will be safe to work him up to the boat and slip the landing net under him—not before.

To land that lure in the chosen spot is the hard thing—a fine art acquired through long practice. The main reliance is a delicate thumb tip, the thumb resting on the reel stanchion and the tip just touching the reel drum, to prevent the reel from spinning faster than the line is going out. Its tendency is to over travel, thus winding up the line backward and making that glorious snarl called a backlash. This your thumb prevents.

The casting is done with the forearm. Tie the victim's arm to his side if he persists in using the whole arm. A good rod will not need more than the forearm, anyway, except for casts of 80 feet and over.

As to lures, I have had the most success with the artificial minnows that dive and wiggle, and with the good old pork minnow. The good artificial lure seems to be something white with a red slash in its throat, and a slanting face that will make it dive and loop like an aëroplane when reeled back through the water. The bass thinks it is a minnow or chub in distress, and so strikes.

It is a humane bait, in spite of its numerous hooks, for it cannot be swallowed or paunched, and the hook is invariably found caught in the hard bony cartilage of the lip, where it cannot hurt the fish. There must be three hooks, one on each side of the throat and one in the tail, and these had better be treble hooks, for a pike may strike, and you cannot catch a flat hook in the bony jaws of his. You will hear many a stuck-up angler sniffing at your bait, but give him the laugh.

To make up the pork minnow, I have found a home-made lure of red fly wound on a large flat hook and weighted with a bit of lead sinker a good starter. To this is attached two small brass swivels and a split ring, with a bright spoon hung in the ring.

The pork rind minnow is cut three inches long, with a tail split up about an inch. Hang this in the bend of the large hook, and there you are! You can buy these, but a few white hen's feathers, some red dye, and some spare time will make up a dozen of them for the price of one. A 4-O forged steel hook is about right.

When this lure is reeled back through the water, the spoon makes a bright flash, and also causes currents of water which wiggle the tail of the minnow in a very lifelike manner. If the hook is made weedless, with a wire prong protecting its point, it becomes a fine fishing tool, as it can be sent right into the lily pads and pickerel grass without hooking on them and scaring the bass.

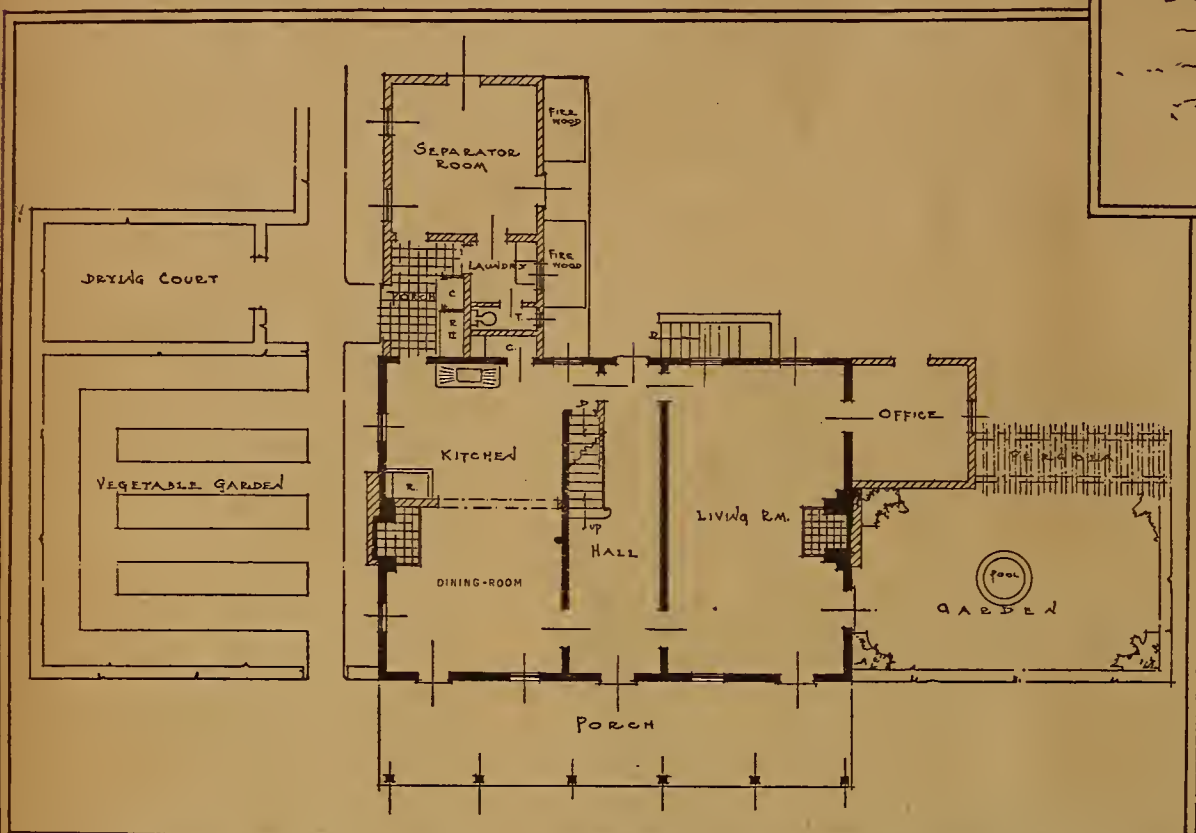
Now as to live bait: Most small streams are alive with small frogs, and a nimble snatch will get you bait. For the festive nightwalker, a tour of the garden and the lawn with a lantern will show to the sharp-eyed that maroon [CONTINUED ON PAGE 26]

And This Is How It Will Look When You Rebuild It

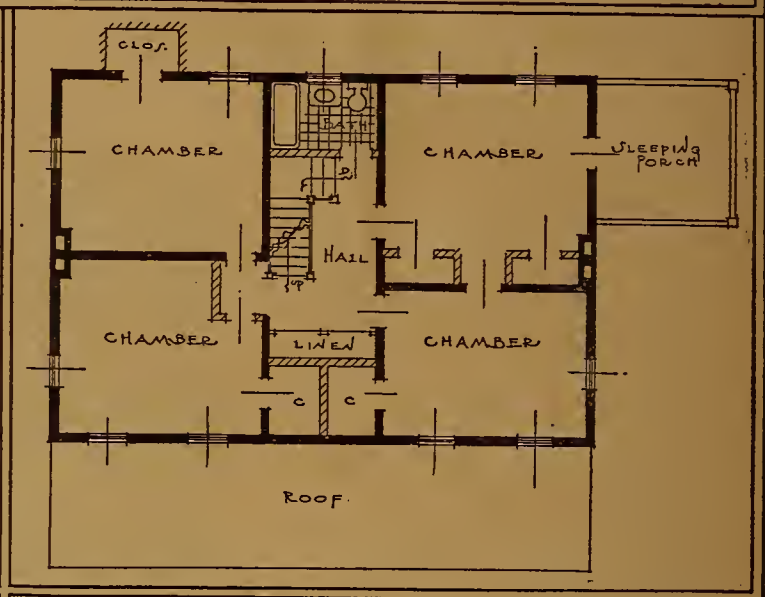
Frank J. Forster, Architect

THE house as found has the architecture characteristic of the Jersey farm. It is dizzy with gig-saw work. The windows are big-paned, and there are no modern improvements. But the general architecture, framework, walls, and roof are all right, consequently it affords a good basis for remodeling and restoring. There are lots of country houses that can be transformed into modern homes by a few inexpensive changes.

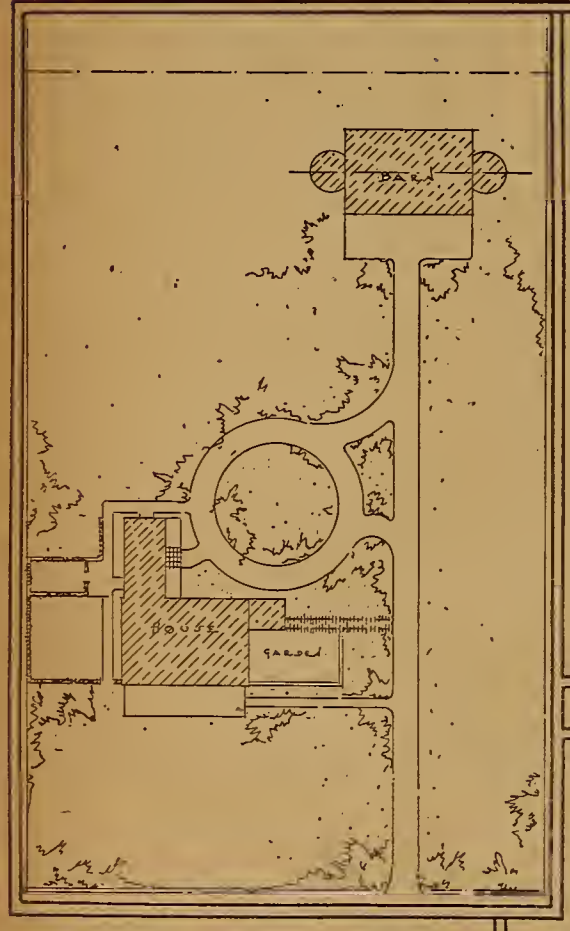




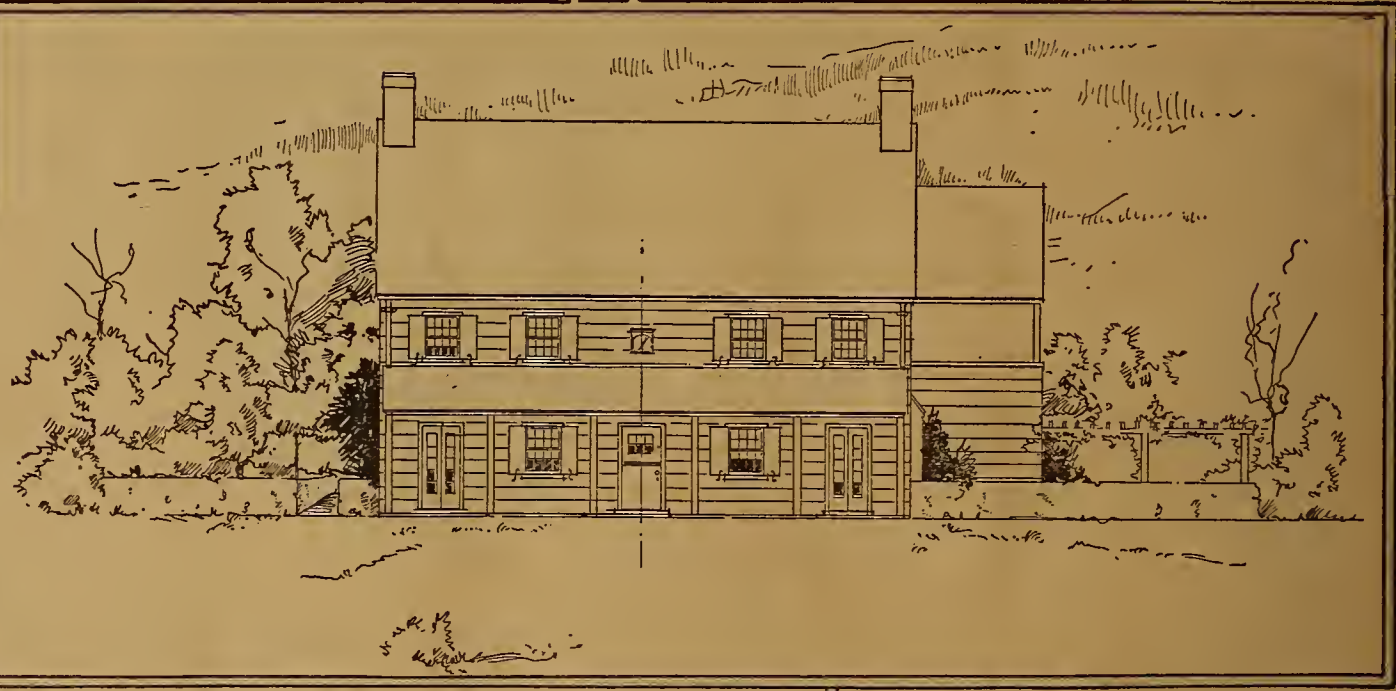
THE old house is marked in black, the new parts in cross-hatching. These include the separator wing with the laundry, kitchen porch, down-stairs toilet, porch and kitchen closets, and the overhang of the eave for the protection of the loading platform and woodpiles. The new entrances to the cellar, from the kitchen and outside, are indicated. On the other side is the office extension and the pergola. A general layout of the house grounds shows the view from the various rooms.



WITH the exception of the bath, linen closet, chamber closets, sleeping porch, and turn of stairs, the second-story rooms are as found. Each is well lighted and ventilated. The master bedroom leads onto the sleeping porch, and is in close proximity to the bath, as are the other rooms. The chamber directly in front of it is suitable for a children's nursery, bedroom, or sewing-room. Plenty of closet room is provided—a very important item.



A GENERAL layout of the grounds shows how the extensions form two sides of a court, with a turn-around and a direct drive to the barn. The house lands are separated from the barn lands by a generous distance, the gardens and immediate surroundings of the house being kept intact. An attractive planting of shrubbery will add much to the effectiveness of this arrangement. The barren look of the old house is entirely displaced by a pleasant setting of trees and shrubs.



THE front elevation of the house as improved shows the office wing with sleeping porch above, the new small-pane sash, the French doors from dining and living rooms, the built-up bases of the chimneys, and the pergola, forming, with the office wall, a background for the flower garden. On the other side is the vegetable garden. These gardens may be surrounded by a low wall or picket fence. The gig-saw work, of course, has disappeared. The entire effect is one of comfort and distinction often lacking in new houses.



THIS side elevation shows the new 24-foot extension housing a separator room, laundry and down-stairs toilet and kitchen porch. It is the same character as the old house. The chimney base is exposed, as per plan, and the shutters and new windows are provided. A simple lattice is added to the porch end.

If You're Going to Remodel Your House These Ideas Will Help You

By Richardson Wright, Editor of "House and Garden"

THIS article is designed to give you ideas that you can use in remodeling your own house wherever and whatever it may be, whether you want to do a lot or just a little.

It lists the steps in remodeling in the order of their importance, gives you costs on each item, and shows you how you can make your house over completely at one time for $2,791; or how you can spread the work over several years, making one improvement at a time, at a cost of only a few hundred dollars a year.

It is so planned that you can scale it up or down to fit a big house, a medium-sized house, or a small house. And when completed you will have a home thoroughly modern and attractive, with separator, office, and miscellaneous wings; heating, and plumbing system; sleeping porches, gardens, etc.

The plan is presented to you now so that you can work out your ideas during the winter, get the benefit of the ideas and discussions that the contest announced on this page will bring forth, and be in position next spring to know just what you want to do.

If you want advice on lighting, heating, or plumbing systems, and will write to the Editor of FARM AND FIRESIDE, 381 Fourth Avenue, New York City, he will see that you get information as to the best the market affords in those lines.

As to the practicability of what I give you here, I can only say that, with many years of personal experience with all kinds of building problems, and with the experience of the best architects, builders, and home owners throughout the country to draw on, I have summed up, after many weeks of careful investigation, the soundest and most economical suggestions I could develop from the whole field.

Of the methods by which a man and woman may make a home, none are more fascinating than restoring or remodeling an old house. Half the work is already done. The remainder will be successful according to the measure of your imagination, your ingenuity—and your purse. For the farmer it may also be the most practical sort of house.

The farmer can either restore the old house to its one-time architectural glory, or else so rebuild it that the original property is scarcely recognizable. In either case he must modernize its living facilities. The methods of rebuilding and restoring consequently combine architectural and sanitary improvements.

If an old farmhouse suits your needs, restore it; but be sure to restore it according to the architectural character of the original. Nothing is worse than a New England Colonial farmhouse made hideous with jig-saw decorations, porches of unsuitable design, and modern, big-pane windows. Or again, a house may eventually prove too small and additions be required. The same rules apply here. Have a heart for the man who in old times dreamed and executed a beautiful home. Don't put a red brick wing to a shingle house when a shingled wing will serve the purpose. In restoring, your work should be limited to putting in new parts where the old have worn out, preserving both the exterior and interior with paint, relaying floors and introducing the modern conveniences of good plumbing and sewage disposal, and heating and lighting plants.

Your success with either restoring or remodeling a house will depend greatly on the original property. Before proceeding investigate these points:

1. Location of the house. Does the house stand above the level of the road? If not, you will receive drainage from the road. The same applies to the other immediate surroundings. The house in a pocket will be damp, its cellar wet, washouts will ruin the land, and you will have difficulty in laying suitable drainage. Land sloping away from the house, preferably to the south and southeast, affords the best location.

It should not be too near the road, else the housewife will have difficulty in keeping her rooms clean, and the house itself will have no approach which is requisite for its setting.

You should also consider the house in relation to the other farm buildings. This will very much depend on the region you are in. The New England grouping connected the house with the barn by a series of arched passages used for woodsheds, machinery storage and chicken houses; the Pennsylvania and New Jersey ground plans show the farm buildings built around a large square. Whatever the location of the house, its immediate surroundings should be kept separate from the other buildings. This will reduce fire danger and give the dwelling the proper atmosphere that it deserves. The house should have its own kitchen garden, flower gardens, and stretches of lawn—a sphere the housewife should control.



Richardson Wright

2. The second question is the location of existing rooms. What do the present rooms look out on? If the view from the living-room, for example, is unpleasant, you will find yourself not wanting to use that room. This problem can be solved by the rearrangement of the rooms inside and the development of gardens outside.

3. To what extent are modern improvements necessary? Heating and lighting plants, a good sewage-disposal system, and up-to-date plumbing add to the efficiency and comfort of all concerned. Modernize your home and your boys won't be lured away to the city.

4. A fourth investigation should cover the actual condition of the house structure—its flooring, beams, roof, etc. In many instances a new roof is needed, or new floors.

To illustrate these points I am taking a house built about fifty or seventy-five years ago. It lacks in everything modern. By restoring it theoretically we can get at the question of what has to be done and what the improvements will cost. The frame of the house—i. e., its beams—are in good condition. Its shingled or clapboard walls are firm, and the roof in a fairly decent state which will require only an occasional shingle or a new set of flashing tins to assure its being water-tight against storms. The chimneys need pointing. There is a cellar under part of the house.

The average farmer might not select such a house to work on, but it has been chosen here because it affords so many points of development.

In restoring and rebuilding this house we are making room for a family of four—man, wife, and two children Space will also be provided for an office and sleeping porch, a separator-room, laundry, down-stairs toilet, and a kitchen and an outside entrance to the cellar.

The architectural character of the house is New Jersey farmhouse style. Roof and walls are shingled. Windows, as we find them, are large-paned. The chimney stacks afford fireplaces on either side. A wide porch extends across the front, added some years ago, and trimmed with a dizzy frill of jig-saw work. Inside the rooms follow the general plan of hall, with dining-room and kitchen on one side and big living-room on the other. Up-stairs are four bedrooms and no bath. Heating was by stoves. A pump supplied water for the kitchen. Lighting was by lamps. Now we are going to restore, rebuild, and bring this house up-to-date.

The original house has a frontage of 40 feet, and is 28 feet deep. To this we are going to add an extension—a separator wing and an office with a sleeping porch above it.

Off the kitchen corner we plan a one-story shingled extension 24 feet long and 14 feet wide. This will house a separator-room, a laundry, down-stairs toilet, kitchen closet, and back porch. The porch contains the icebox, easily reached from the kitchen, and a broom closet, and gives access to the laundry and separator-room. The housewife goes from the laundry across the porch to the drying yard, a stretch of grass behind the vegetable garden safely removed from the dust of the road.

In order to preserve the general character of the original, we will clapboard the walls of this extension. The inside studs may be left uncovered, or finished with wall board, as one desires.

Two windows are provided on the side facing the drying court, a door at the end nearest the barn, a loading platform midway down the other side, with windows to light the toilet and laundry. On this side the roof has a four-foot overhang to shelter the loading platform and the stacks of firewood on either side of it, the firewood being easily reached through a back kitchen door.

The other addition contains the office and the sleeping porch. Every farmer ought to have an office where he can keep the accounts and records of his stock and sales, a room especially given over to that purpose. In this extension, doors lead to the living-room and to the back yard. One window lights it sufficiently, for the office measures only 10 x 11 feet. Off one corner we run a 17-foot pergola, which, with the office wall, forms a background for the flower garden.

Both these extensions can be built on concrete foundations. The roofs may, if one desires to make them fire-proof, be covered with asbestos shingles. The floor of the separator-room and laundry are to be concrete, the roof of the sleeping porch is duck.

Other exterior improvements include the introduction of long French windows in the front and living-room sides, thus giving access respectively to the porch and flower garden. On each side we have built out the chimneys at the base, leaving the bricks exposed—a pleasing architectural feature. In respect to the original architecture we have cut off the jig-saw work, substituted small-pane sash for the large ones, and added shutters. In the rear the original bulkhead entrance to the cellar has been turned around, and widened to give ample space for carrying down milk cans to the cooling-room.

Now we go inside the house. As the plans show, there is a large, house-depth living-room, with a window on the rear yard, a door to the office, and our new French windows leading to porch and garden. The fireplace has also been restored for use.

On the other side of the hall the kitchen and dining-room have been made into one big room with sliding doors. There is a dining-room fireplace in the corner, and behind it, on the other side of the partition, stands the range, both using the same chimney. In developing this one big kitchen-dining-room we are hoping that the farmers of America may see the opportunity for picturesque treatment that the farmers of the Continent have long since developed.

We find the stairs going up straight to the second floor. We are turning these in order to get space for a bathroom at the rear, and cutting a little into one of the chambers to make room for the landing. At the front we are introducing linen closets, and using the remaining space for front chamber closets.

The owner's rooms are in suite—a front chamber for the young children and a back bedroom, with sleeping porch, for the parents. Ample closets are provided. There is easy access to the bathroom.

The structural changes to the house itself are really small. The bathroom is a necessity and the down-stairs toilet a convenience. It is built up on one stack of plumbing, the most economical we can devise. This will provide service for the laundry, toilet, separator-room, and kitchen sink. Hot water is also piped into the separator-room, laundry, and bath. The sewage is taken care of by a septic tank.

The two other modern improvements are heating and lighting plants, which we will discuss when we come to the matter of costs. They are expensive items, but they will amply repay in comfort and convenience.

It is not to be supposed that the farmer—unless, of course, he is very well off—will make all these changes in one year. He can very well extend them over three years, adding the separator wing first, then the office, and finally developing the gardens. His heating and lighting plants and plumbing should be [CONTINUED ON PAGE 26]

Prize Contest Announcement

$50, $25, $10, $10, and $5 in Prizes

For the best five letters from readers of Farm and Fireside on

How We Made Over Our House

YOU need not be a subscriber to take part in this contest. The conditions are these: Tell, in not more than 1,500 words, (1) how you located the house with relation to other farm buildings; (2) how you developed and beautified the grounds around it; (3) how you rearranged and relocated the rooms to improve their outlook and convenience in regard to time, labor, and trouble saving; (4) how you improved the architectural appearance of the whole place as remodeled; (5) what modern conveniences you installed, and how you arranged them to win economy of time, space, labor, and cost; (6) what special features you designed and originated yourself to make your farmhouse living and working conditions better for yourself and others in the family. Give the costs and the results obtained under each heading. Send a good picture, if possible, of the place before and after remodeling.

The prizes will be awarded to those who accomplish the most in modernizing and beautifying the place with the least amount of money. A specially chosen board of experts, headed by Mr. Wright, will select the prize winners.

Address your letter to House Contest Editor of FARM AND FIRESIDE, 381 Fourth Avenue, New York City, enclosing postage for its return if you want it back. We will pay for all letters accepted outside the five prize winners. The contest closes September 30th, and all letters must reach us not later than that date. The prize-winning letters will be printed in one of the winter numbers. THE EDITOR.



Photo by Alice Boughton

Katherine and Dorothy Underhill of Long Island, New York, are so devoted to the proper bringing up of their calf, Mignon, that they took their brand-new toothbrushes, which their mother had bought, and used one to keep Mignon's teeth clean and the other to curry her. Mignon seems to enjoy the operation, but we imagine that their mother was not so pleased when she heard of it.

I Am No More Honest on the Farm Than I Am in Town

By Bruce Barton

ONE thing writers do that I wish they would stop. They are forever writing about us farmers as though we were all, without exception, clean, brave, hospitable, and honest; and they write about us New Yorkers as though no one ought to enter our midst without first camouflaging the gold fillings in his teeth.

I use the word "us" in both instances advisedly, as will subsequently appear.

Most writers who attack New Yorkers never see any New Yorkers. They may visit New York, but New Yorkers are practically invisible. They are shut up in offices earning a living all day, and at night they are home in bed.

The people whom one sees in New York at night are not New Yorkers; they are customers of the hotels, walking the streets and waiting for their rooms to cool off.

Of course, writers seldom see any farmers either, except on the stage. But I have had the good fortune to see both. In fact, I *am* both. I lead a Dr. Jekyl and Mr. Hyde existence—partly in New York, partly in the soil.

The people I live among during the summer are so honest that we simply pull the door of our house shut in October and go away for eight months; and in all the years we haven't lost even a souvenir spoon.

But even in this perfect community there are folks no better than they ought to be.

One of them swindled me when we were boys together. I had a pair of pigeons of a very rare variety that had cost me many weary hours of work at 15 cents an hour. One of them died, and I looked far and wide to find a mate for the lonesome widow.

One day a boy appeared with a bird that was just exactly what I had been looking for—the right breed and rightly marked—a white tumbler pigeon, with a blue saddle across the back.

I paid a high price because I wanted that pigeon so much, and the deceiver went away. Two weeks afterward I began to notice a change in the head of the bird he had sold me. I examined it closely, and the bitter truth was revealed: there were black feathers there—just enough to destroy the perfection of the marking.

The boy had pulled out every black feather before he sold me the bird, but now they were growing back again.

He is a man to-day, and he puts all the little strawberries in the bottom of the box, and covers them with big ones on top.

If he lived in New York he would be selling worthless mining stocks. He's wrong as a farmer, and he'd be wrong as a New Yorker; his location hasn't anything to do with it at all.

All of which means simply this:

The longer I live the more I believe that human nature is about the same everywhere. There are far more good men than bad to any square mile; and the percentage of good to bad doesn't vary enough in any given section to be deserving of mention.

I call my house in the country "The House by the Side of the Road," after the poem by Sam Walter Foss that begins:

> "Let me live in a house by the side of the road,
> Where the race of men go by—
> The men who are good and the men who are bad,
> As good and as bad as I."

I like that line "as good and as bad as I." It contains the real truth about us. In the city or on the farm we're just about the same.

At least that's been my observation. Living partly on the farm and partly in the city, I breathe both atmospheres. And looking back over the record I give it as my frank opinion that I'm about as good—and as bad—on the farm as I am in town.

How I Make My Farm Work Easier

Personal experiences of practical farmers who have learned the value of studying out little ways to make their heads save their heels

FIRST PRIZE

FARMERS generally would like to increase their income and at the same time do less hard work. But it is hard to do it without thinking about it, and far too many believe they have no time to stop and think.

Hard work seems to benumb the thinking capacity of far too many of us. To-day I saw a farmer clearing his dairy barn, carrying each heavy scoopful of wet manure at least 75 feet. And, strange to remark, he seemed to have no thought of improving conditions.

If there is any tendency toward progress in an individual it is generally developed by necessity. The man who invented a tobacco and tomato plant transplanter told me he did it under the stress of an aching back caused by setting out tobacco plants.

In recent years, due to the absence of my son and the high wages necessary to secure labor, I have been forced to seek short cuts to attain results. Like other farmers in the Corn Belt, I find much of my time is taken and much labor required to produce a corn crop, also considerable cash to buy a protein feed to balance it properly as a feeding ration, and cash to buy fertilizer to replace the soil elements taken by the corn crop.

But I found that by planting soybeans in my corn I could grow my own protein, and that both crops can be cultivated by the labor required to raise a single crop. Furthermore, one secures not only a much greater amount of feed, but also a combination that is much better balanced than either alone.

Then I make arrangements whereby I get this double crop harvested without expense. The hogs do it, and they prefer the combination crop to either the corn or the beans alone. They do not worry about long hours, and they stick to the job until it is done.

They distribute the manure evenly over the field. This, together with the nitrogen secured through the beans, builds up the soil. The scheme is better than a "two birds with one stone" proposition, because it provides for growing the two crops at one cultivation process, balancing the ration for the pigs, harvesting the double crop, and distributing the manure.

I save myself a great deal of hard work and expense by handling the stable manure but once. Horses and cattle run loose in large box stalls or sheds, and ground rock or acid phosphate is scattered over the manure at certain times, and this is hauled directly on the clover fields that are to be plowed, so with little work I get the manure and fertilizer out where it is needed.

Instead of trying to make water gates permanent, I now stretch a section of discarded wire fencing across the stream, anchoring it at the bottom; then if a flood tears it loose one end always remains secure, and I soon stretch it back in place.

I find in feeding and doing chores, which formerly took an hour or more, I can take five or ten minutes to rest and plan, and still complete them in due time.

These last-mentioned savings are suggestions along a line that any farmer can think out for himself if he will try.

But planting soybeans in the corn and mixing phosphorus with the manure are more than devices to save work: they are real constructive practices that lead to better farming.

It may not pay a farmer to dream, but it pays to think, to plan, to systematize.

C. M. M., Indiana.

SECOND PRIZE

I AM farming 240 acres, and keep four horses. I own a 15–25 tank type tractor, which saves me hiring a man to drive horses, and does the work quicker.

In the spring work it saves me the help of four horses, as it will pull two four-horse drags in dragging, and will pull two disks to work up the ground. It also saves my keeping four extra horses during the summer.

I have a feed mill to grind my own feed, thus saving a trip to town and the cost of getting it ground. I also have a corn shredder, which saves me hiring a man to husk my corn in the fall.

In planting I try to have my clover on a different piece of ground every year, as it makes the ground richer. I plant corn on the same ground that I had clover planted on the previous year, and I get a better crop of corn.

I have my fences straight and my fields as square as possible, as this saves the time of turning around and cutting across the fields with plow, seeder, binder, or other machinery.

I keep my machinery in the shed when I am not using it. I also keep it well greased, as this makes it last much longer. I have a hayfork in my barn, which unloads the hay much quicker and easier than by hand. In the field I use a hay loader to load up. These things save the help of one or two men during haying time.

I have a shop and tools, so that when something breaks on some of the machinery I can generally fix it myself, and if I did not have any tools I would have to make a trip to town.

I have a car, so when I want to go any place I can go much quicker and easier, thus saving time.

I have a litter carrier in the barn. It takes less time and is easier work than hauling the litter out in a wheelbarrow. I have so made arrangements that it will dump right in the spreader, and I then haul it to the field, thus saving pitching it once more.

I also have a manure spreader, which unloads much quicker and more evenly than I could do it by hand.

I am milking 16 cows, which I test about once a year. The poor ones that do not give rich enough milk to pay for their keeping I sell. If I did not test my cows I would be feeding one or two cows every year that did not pay for themselves. I keep about 25 head of young cattle to replace those I sell.

I have 39 little pigs and 5 old sows. I have a cement walk outside of the hog-house, where they eat. This saves all the corn and feed, as they do not stamp it into the ground.

I have a water tank up-stairs in the barn, and pipes run down to the hoghouse. To give the pigs their water I just turn on a faucet. I have water fountains for my calves and my bull, as the latter always stays in the barn.

E. P., Minnesota.

THIRD PRIZE

I HAVE felt all during my fifteen years of experience on the farm that making the work lighter is one of the biggest things a farmer can do, and I have taken advantage of every opportunity to save useless steps.

Most of my short cuts and labor-saving devices are small ones, since my farm has only 50 acres.

My first improvement after I bought the farm was the building of a dairy house over the stream that flows past the house. Mary, my wife, furnished the ideas, and I did the work. We left one side of the flooring out, so that we might put the butter and cream into the cold water. It is cool as the cellar, and more handy.

The next year we made our five-acre orchard into a turkey pen by fencing it with wire. We got this suggestion from FARM AND FIRESIDE, but we carried out the plans to suit our needs, instead of making it according to the directions. Our profits on the turkeys have increased every year since we built the pen, for we keep them in it all the time, and do not lose any of them. Mary now makes enough money from them to buy her own clothes and the children's.

The creek over which I built the dairy house flowed through only one field. Until last year I kept the cattle in this field, and pumped water for the hogs. I did not think of dividing it until one of my neighbors suggested it. I did it immediately and since then the cattle and hogs have both had flowing water.

Besides these, I have numerous other little devices everywhere. There is scarcely a nook or corner of the farm that does not show some of my handiwork. I made a rounded trough to feed the calves, that I might feed more than one at a time; I put more windows in the chicken house, to make it brighter and easier to keep clean; I took down the ladder that led to the barn loft and put up a stairway; I put stiles over all my fences that do not have gates in them, to keep people from climbing and ruining the wire; I put in heavy flood gates at the places where the stream enters and leaves my farm, to save the trouble and expense of repairing the fences after high water.

I have picked up many similar devices here and there, and I feel from my own experience that it is worth while for every farmer to keep his eyes and ears open for suggestions.

L. C., Indiana.

FOURTH PRIZE

IN THE first place, I practice intensive farming. I try to make two blades of grass grow where one grew before, and I have accomplished it by using the right kind of fertilizer and a perfect crop rotation, which increases my income and lessens my work. I use cowpeas and the clovers in my rotation. I don't go much on soybeans, for I have tried them, and find they didn't do well here. They may be all right elsewhere, in different soil. The preparation of the seed bed is a particular point with me.

To plow right and at the right time, and pulverize well with roller and harrow, is the big end of cultivation in grain crops with me.

You see, we have clay soil here, and it has plenty of potash and lime in it, and I allow nothing to be burned that will decay and can be turned under to make the land more fertile and give it more humus.

When I put a piece of ground to meadow I leave it in grass just as long as I can get a paying hay crop, and pasture it with my stock as much as I can, and still not injure the hay crop. I try never to follow the same grain crop in succession.

There is more clear money in the hay crop than in the grain crop, especially if you have stock to feed in the winter.

I do not turn any green crop under that can be utilized for feed. Manure is better than the green crop. Sweet clover is great as a fertilizer. I have plowed in the fall, and plowed in the spring, but I find out that plowing just before planting is best for me, as it saves cultivations in corn, potatoes, cowpeas, or cane.

Seed is the great point. I don't care how good your land is, or how good your cultivation is—poor seed, poor crop. Seed has a back reputation just the same as stock has a pedigree. This haphazard way of picking seed makes your work bring you a small income. Now, last year, I raised a good crop of Irish potatoes, and all of my neighbors failed. It was not luck nor in the weather, for the weather was adverse, but in the seed and time of planting. Consequently, I sold all of my neighbors seed potatoes. I could have sold more had I had a larger crop. However, I made a good profit on what I did have. I had 12 smooth potatoes that weighed 11 pounds, and had some rough ones that weighed 1½ pounds each. The best seed you can get will make you the biggest profit on the least amount of labor. Of course, fertilization and tillage help, and the weather is quite a factor. Grain farming in itself is not complete; you have to raise stock for fertilizer or use commercial fertilizer.

On the two highest points on my farm I have two ponds; when there is plenty of rain I lay in a supply for a scarcity of water, and can irrigate the lower ground if need be. I siphon the water to the barnyard; when the springs go dry I still have a supply to fall back on.

"A stitch in time saves nine" holds good more especially in farming than any place else.

G. L. H., Missouri.

FIFTH PRIZE

I BELIEVE one of the greatest problems that faces the modern farmer is that of keeping a farm in condition so it will build itself up without the use of fertilizers. Every farmer should see to it, whether he uses fertilizer or not, that his farm can produce a crop without fertilizer. In other words, the farm should produce its own fertility in the form of barn yard manure and clover. If it cannot do that you are robbing your soil.

I have made it my aim to get and keep my farm in such condition by what I call a "five-year rotation." I have tried this plan now for ten years. Before that I always sowed wheat on oats stubble, and had hay from the same field more than one season. I have a hard clay farm, and found that after I had left a field in grass (clover and timothy) for a few years, and plowed it for corn, it was very hard, and full of wireworms. I once counted as many as 134 in one hill of corn. The fly is fond of laying its eggs in a timothy field, and if the grass lays over one year these eggs will develop into worms, and later on into flies again.

Now I never plow stubble (wheat or oats), but always turn under clover. First I have wheat, then grass, then corn, then oats, then grass and wheat again. That does not give the wireworm a chance to breed.

Here's another advantage: The clover brings nitrogen and humus into the soil which no other fertilizer can do, and so produces its own fertility. I hay as early as possible, because the hay retains its life better, and because I have more clover to turn under in the fall for wheat.

Another advantage is that it softens the soil. Now I have just as much hay (acreage) as I have wheat and oats combined each year. I always seed down oats, and turn under grass for wheat. I plow twice as much as I used [CONTINUED ON PAGE 49]

Do Your Folks Give You a Chance to Make Money

Prize Contest Open to Boys and Girls

WE HAVE had a number of letters recently which made reference to the fact that fathers and mothers have had a whole lot to do with making farm life attractive to their children. We also have had two or three letters from town folks who were born on the farm, who complain that the reason they left the country was because their folks didn't give them an opportunity to make money on the farm. We would like to know more about the chances fathers and mothers give their children to make money, and we are going to let the boys and girls tell. For the best letter entitled "Chances My Father (or Mother) Has Given Me to Make Money on the Farm" we will pay $5; the second best, $4; the third best, $3; and for all others which we publish we will pay $2. All letters should tell what effect these chances had on increasing your interest in farm life. This contest is open to all farm boys and girls between the ages of twelve and eighteen. No letter should exceed 600 words, and it should reach the Contest Editor, FARM AND FIRESIDE, 381 Fourth Avenue, New York City, not later than September 25th.

How I Make My Hogs—And

By Charles F. Lawson

I FIND hog production profitable because I have learned how to give the packer what he wants. To my way of thinking, there are two kinds of demand: the seasonable demand, and the demand which is the same the year around. Meeting this seasonable demand is merely chance work; I cannot produce to meet it all the time. It changes from day to day, and it would make me if I tried to keep track of the changes.

I make first-class butcher hogs the year around, and in doing this I often top the market. The butcher hog is always wanted, because the packer can get from it various cuts which find a ready market at *all* times.

Also, I choose my markets. I send my best hogs to Indianapolis, and the rough stock to Chicago. The packing industry at Indianapolis is small, therefore select and choicy. At Chicago the packing business is the biggest in the world, and any kind of edible stock can be handled.

As I feed from 1,200 to 1,500 hogs a year, naturally all of them don't grade up as prime butchers. I have many rough hogs and old sows for Chicago.

About one fourth of the hogs are of my own raising; the rest I buy at various points over the country. I find a better chance to profit on the hogs I raise myself. The bigh price of feed and the price of feeder bogs, together witb its risks from vaccination, disease, and other things, make it more bazardous.

However, I have been in the hog business for tbirty years, and am *still* learning things about it. I find the marketing end the important thing to contend with. It's the price you get that determines whether you continue or seek a new line.

Experience bas taught me good marketing methods. I find that in the solution of marketing lies much of the solution of production problems. The sum of it all is this: Good bogs are most easily sold, and bring the best prices.

In tbe spring—up to the last of April—I had shipped 10 loads of hogs to Indianapolis since the first of December, and all of them topped the market, or landed within 10 cents of it.

I buy most of my feeder hogs at Kansas City, some at Indianapolis, and occasionally I go down into Oklahoma. I aim to buy feeders twice a year; and when I go on the market for them I buy bogs which can be made of market weight—about 250 to 275 pounds—in four or five months.

I feed to come on the trade *after* the big runs are over and prices are up again.

For instance, for winter feeding I buy tbe last of Octoher and the first of November. At that time I get a hog weighing about 100 pounds. Spring pigs are coming to the market at this time, and prices are lower. The stock I buy has plenty of frame, hut not so much flesh. In five months these hogs will weigh from 250 to 275 pounds.

They will be ready for market the last of March or the fore part of April, when tbere are not many hogs coming and prices are good. For summer feeding I buy in March and this gets me on the market in August and September, just before prices begin to settle during the fall and winter months.

The reason I get frame, and not flesh, is that it costs less to put on fat than it does to grow bone and muscle.

In making feeding bogs the year around I have the advantage of knowing that I can get a good price for the feeder hogs five months bence, when they are fat.

The butcher bog is tbe kind whicb is not all lard, hut whicb yields a goodly proportion of loins, bacon, and hams—tbe meat which brings the bigbest price on tbe *retail* market.

I bave in mind a type of bog when I go to buy feeders. It is clear and distinct, but when it comes to putting it down on paper, somehow or other it is not so easily described. I aim to get a well-bred hog, for I find that an animal of this kind nearly always bas the other points which I look for in good feeders.

A well-bred hog has quality, indicated by hair, bone, and general appearance. I like a hog with a well-arched back, plenty of medium-sized bone, good back development, straight sides, carrying out to the hams, which should be deep and thick.

A hog which has heavy bone and rough hair generally lacks quality and breeding. The underline must be tidy, for flabby hogs don't sell well. I aim to get quality to protect me when I have to compete with good stock. It counts, you can bet on that.

I breed about 50 sows every year. These are not pure-breds, but by constantly grading up the berd by using pure-bred sires, and keeping the best female offspring for the breeding herd, I have sows which are very near pure-bred.

I start breeding for spring pigs about the first of December. I have two boars, and they serve the entire bunch. I allow them to serve two sows a day—one in the morning and one in the afternoon. It takes about two weeks to complete the berd, but this gives me the advantage of having the pigs come at intervals, so I can give them the necessary care, and reduce losses to a minimum. After the sows have been bred I turn them out, and let the boars run with them, so that any of the sows which did not catch will be rebred.

I generally buy a two-year-old boar, paying from $75 to $100. This gives me a chance to see wbat the sire is capable of producing before I take him. With a yearling this is not possible. And witb a big, mature boar I get bigger and stronger pigs tban from a yearling. I keep the boars for two years if they prove capable, otherwise I castrate and fatten them after tbe first service.

The best gilts are kept for breeding, and I change boars so as to prevent inbreeding. It is very essential to watch this, for breeding a sire to his daughter will not give you very good results, especially if you perpetuate it.

A good boar is half the berd. You can correct many faults in the breeding herd by using a sire which is strong in the weak points, and hy keeping the best female offspring for breeding.

I aim to keep the sows in good condition from breeding to farrowing. I feed them plenty to build up the fetus, and to keep them in fine physical condition; but not enough to allow them to take on weight. If sows get fat they soon become lazy, and will not produce big or strong litters. And a lazy, fat sow will roll on, and sometimes kill, her pigs. She isn't a good mother, either.

I let the sows run on blue-grass pasture, and feed them corn and tankage, with hominy hearts when corn is short. I find they are about the same in feeding value. About four or five ears of corn and one-half to three-fourths pound of tankage is enough. At first the sows will eat heavily of tankage, but later on will hardly eat half that amount.

Tankage is a high protein feed, and contains the stuff needed to build up the pigs. This ration keeps the sows in nice condition, not allowing them to get fat or run down. If a few are not in good condition I either feed them more corn, or less corn and more tankage; or, sometimes, I substitute mill feeds for the corn.

I keep a record on the first breeding of the sows, so I can tell witbin two weeks of when the pigs are going to come. A week before the first sows are due I take all of them into the hog house. I leave them on the same ration, right up to farrowing. This rest helps them, and confining them helps eliminate a lot of their nervousness.

The day before farrowing I cut the feed considerably, and let the sows have all the water they want. At farrowing time the sows will drink heavily, for they are feverish. I give them nothing to eat on that day.

The following day I tbrow them an ear or two of corn, and gradually increase the ration until they are getting a full feed of corn and tankage. This gives them plenty of milk for the pigs.

I make them in eight months, and it is necessary to keep the pigs growing all the time. If a pig is stunted the first few days, during the suckling period, it is hard to get him back again. There is no feed like the sow's milk for a pig.

I aim to have them come in April, at which time the weather is usually warm, and consequently the losses will be small. Early pigs usually come when it is cold and damp, and there is big loss.

When the pigs are about two or three weeks old I fix a creep for them, into which I put corn or hominy hearts and tankage. They won't eat much corn until they are about a month old, but they nibble a little at the tankage.

There is nothing like sunshine for pigs, and after they are about a week old I let them run out if it is nice and warm. On cold, damp days I keep them in.

It does a man good to see his pigs playing around a lot on nice days. I know then that they are feeling good, and when in good condition pigs grow rapidly.

I keep the pens in the hog house well bedded. The floor is dirt, but with a little straw the pigs have a warm bed if the night is cool.

I keep the sows on blue grass, and if I feed shelled corn or hominy hearts I use a self-feeder; if I feed ear corn, I hand-feed it. I have minerals, such as copperas, salt, soda, charcoal, ground limestone, and salt, in the feeder compartments for the hogs; sometimes I buy a stock powder or conditioner to kill off worms. The tankage I always have in a self-feeder.

As soon as the pigs start to eat I keep all they care for before them at all times. I have been making 250-pound pigs in eight months, and I have to push them from birth. I have found it is better to push them along, rather than to carry them on pasture and just a little feed.

My pigs come late, and I must rush them to reach the good market, which follows the period of heavy runs. Another reason for the lateness of farrow is because I feed cattle, and I want them to run behind the steers to pick up the 15 per cent of the corn which the steers bolt.

Each year we put out from 200 to 250 acres of corn, and for fifteen years I haven't harvested any of it. I am never bothered looking for help on this account.

I usually split the cornfield into plots of 40 acres. Into this I turn 700 head of hogs—pigs and all. In the two months between Octoher 15th and December 15th, they have the whole field cleaned slicker than a whistle. All the while the hogs are in the field they have access to tankage and minerals, or to stock powder if I am using it.

I don't wean my pigs; I let the sow do this. It saves me trouble, and the pigs have the advantage of getting a longer suckling period. Milk sure helps to fatten them, and it means less feed. With few exceptions, I don't breed any of my sows for two litters.

The care of the boar, to my notion, is quite essential. I generally pen up the boars after farrowing time, and feed them light on corn and tankage. The only time they run with the sows is after all of them have been bred. I never allow the boars to get fat and lazy. My idea is to keep them in good condition *all* the time, so that at breeding time they will be up on their toes, and produce good pigs.

If I have sows which are unusually good mothers, and have big litters of pigs, I keep them for two litters—that is, they have a crop of spring pigs first, and then I breed them back for fall. After these pigs have been weaned the sows are fattened and sold. Feeding, rather than breeding, is my specialty.

I always go to market with my hogs. It is there I learn what the packer wants and what he is paying for different kinds of hogs.

I believe it pays to go to market with stock. Not long ago I shipped some hogs. The salesman had a whole alleyful of hogs consigned to him, and sold them in one lick.

The attendants started to weigh the stuff. My hogs at this time were eating and drinking heavily, and putting on a nice frill. In about an hour the whole batch of hogs were weighed, and then mine were driven to the scales.

In that time the increase in weight meant $50 to $75 to me. Had I not been with them they would have been moved in their turn, and I would have been out that money.

I have succeeded in the hog business because I like it. Any man who likes anything can succeed at it.

The Bell-Cows of Yesterday are the Tail-Enders of To-day



Charles F. Lawson

FULTON built the first steamboat, but nobody would ride on one like it to-day. Why? Because there are so many *better* ones—bigger, faster, finer, safer. The worst ship afloat to-day has got Fulton's old tub cheated forty ways.

Maybe you had the most profitable method of feeding hogs—*ten years ago*. But if someone has improved on your method since then, yours has gone into the discard, and it's up to you to get another method that is better than the best to-day.

Folks will *always* buy something *better*, if you produce it for them. And they'll pay you just a little better for it than they paid for the former best. If these two articles on hog production and marketing prove anything they prove that—just as Fulton's experience proved it, and just as it is being proved in thousands of instances everywhere every day, even on the farm.

Quality and Profit are great little playmates, if you will just bring them together. THE EDITOR.



"I find personal attention helps a lot"

Why They Top the Market

By Thomas J. Delohery

IN COLLECTING data for this article I have tried to pick out the things you want to know as a bog producer. Having raised hogs, naturally I bave the farmer's viewpoint, and have attempted to state the packer's as I got it from him.

The information contained herein should give you an insight into the packing business, so you can get both ends of the industry. Much has been written about the production of hogs, and some upon successful marketing; but the information dealt largely with local problems, and how the stuff was handled on the market.

While the farmer is interested to know how his hogs are handled on the market, it is of vital importance to him to know what is done with them by the packer.

A hog is a hog when the packers have big orders and the market receipts are insufficient to fill the demand, but over a period of a year your butcher hog finds the best demand.

The reason the packer wants the butcher bog is because that animal yields the highest percentage and best quality of the cuts for which there is the greatest demand. A ruby will not bring as much as a diamond; neither will salt pork sell as high as bacon. And the packer can pay you most for what he in turn can make most from.

Some hogs will yield *more* product than the butcher hog; but the hutcher hog yields most of the *kind* of meat which is in big demand, both for foreign and domestic trade.

This is what I learned when I went into the packing house to find what kinds of hogs it would be most profitable for you to produce; in other words, your hog from the standpoint of the packer:

The principal domestic cuts, for which the demand is greatest, are shoulders, loins, and Boston hutts, which are known as fresb products; and hams and bacon, which are the cured product. The butcher hog yields all of these cuts, and it is the butcber hog which yields the Cumberland and Wiltshire for export orders. These cuts come from the best quality hogs, which are light and rangy, so that the whole side may be used for bacon.

Studying the problem from the angle of the farmer, one finds that the hog weighing from 175 pounds to 260 pounds requires less feeding than a heavier one, and this is the range in weight of the butcher animal. In this respect, the interest of the packer and the farmer coincide.

After a hog reaches 200 pounds the gains are made at a cost to you which is higher than the current market value of hogs. The cheapest gains, experiments show, are made up to that weight. This for the reason that a hog after it reaches 200 pounds cannot consume so much rough or cheap feeds, and still gain. The ration from then on is made up of high-priced concentrates.

The physical make-up of a hog is such that it has but one stomach. A steer has four, and has the capacity for handling rough feeds up to the time of marketing.

"Hogs weighing from 200 to 260 pounds," said E. R. Gentry, general hog buyer for Armour & Co., "are the most desirable for packing purposes, as they yield cuts of all merchantable averages, and, if properly fed, will yield well for lard. Hogs weighing from 175 to 200 pounds are the most desirable weights from which are seleeted the products suitable for export, and the lightest averages of cuts for domestic usage.

"We want good, light, and medium butcher hogs. The following table will show how the butcher hog, weighing from 200 to 260 pounds, dresses out, and is cut up into edible products:

	Percentage
Hams	12.50
Shoulders	10.50
Sides—Bacon belly	11.50
Sides—Fat back	9.95
Loins	21.45
Prime steam lard—Killing lard 4.50 Cutting lard 8.00	9.75
Other cuts—tenderloins, spare ribs, tails, snouts, etc.	12.50
Total dressed carcass	6.50
Leaf fat	73.20
Casings, heart, liver, cheek meat, etc.	2.80
Total edible products	12.00
Moisture and fecal matter	88.00
Total	12.00
	100.00

"After studying these figures it is not difficult to understand why we are willing to pay more for the butcher hogs."

Quite naturally the question arises as to what breed of hogs the packer likes best. There is no preferred breed. Any breed can be made into a prime butcher hog, if properly handled. Here is where production connects with marketing, and wherein, as is shown in Lawson's article, farmers can solve their marketing by proper production.

Uniformity of size, weight, color, and quality have an effect on the price, and this sort of drove always sells better than a mixed lot. In the first place, a uniform lot looks much better than a mixed drove, and the buyer is often influenced by appearances—in fact, this is the only thing he has to go hy when buying. Of course, he judges the quality and dressing percentages too, but uniformity helps a lot.

Quality is a big item in the value of a hog. This depends on breeding, care, and feeding. The latter, perhaps, needs the most attention. Witb corn and other concentrated feeds increasing in value, the producer is using considerable substitutes. Commercial feeds are finding wide use in making pork, and small grains are being used more extensively.

Compare the figures Mr. Gentry gave me with these I obtained on the kill of a load of hogs averaging 300 pounds, which dressed 81.95 per cent. This kill is better than the average market hog. The prices also show why development over certain portions of the carcass are wanted:

Wholesale Cuts	*Wt. in lbs.*	*Price*
Head	12.95	$0.15½
Shoulders	45.46	.22
Loin	26.92	.23
Bacon		.44
Spare ribs	1.58	.19
Hams	36.67	.22
Hocks		.18
Fat Backs	31.04	.30
Lard	26.12	.26½
Bellies*	56.70	.20
Miscellaneous†	8.45	...

*Includes weight of bacon. Some of the hogs, such as this weight, do not yield any bacon to speak of, being too fat. Bellies are sold as mess pork, by the barrel, which weighs approximately 200 pounds.
†Includes the weight of hocks, etc.

The prices stated above are not current, but were actual at one time, and can be used to illustrate the point that hogs developed over the loins, hams, and sides bring the most money. Tbe 300-pound bog is too heavy for a butcher, and is known as the lard type. This weight results from long feeding of corn or other highly fattening feeds.

It will also be noticed that hogs of this weight provide a lot of the cheaper product, and are needed to balance the supply. Having *all* butcher hogs would not do, and hogs of the lard type find good demand at various times of the year.

The other day I ran into Charley Goepper, a hog salesman, formerly a buyer for one of the big packers. He bad four or five loads of hogs in his pens, and the farmers who owned them were standing around.

A buyer came along, looked at the four loads, and asked Goepper what be wanted for them. The price was too higb, for the buyer didn't take any of them. After he had left, one of the shippers questioned Goepper as to the difference in prices on his and the next load, a neighbor's.

The load was a fine hunch—that is, from the standpoint of fleshing—but was rough and had very little quality. The next pen was nicely finished, and well bred. They were a tidy load too, and quality was quite evident.

Having little to do, Goepper pointed out the difference between the four loads, as they looked to him, both from a buyer's and seller's standpoint.

The first thing he did was to run a half dozen of all four loads into vacant pens on the other side of the alley. No sort was made, the hogs were taken as they came. He started with the best and compared them with the others.

"This bunch," said Goepper, "is prime. Notice how even they are—that is, the fleshing over the back and sides. See how nicely arched the back is, and how straight and tidy the underline. The hogs are of medium stretch, medium bones, thick over the back and hams, and their bair is nice and sbiny. The shoulders are not big and rough, and the jowl is not so heavy, so there will not be much waste in cutting. There is no falling away behind the shoulders, the hog carrying well out to the rump.

"Compare these hogs with those," he continued, singling out the swine from the pen of the farmer who asked the question. "They are big and rough, and don't have much quality. The shoulders, as you will note, are rough and heavy, and the sides are not even to the hams. The underline is jagged or flabby, even though the back is well arched. A flabby hog won't cut up nicely.

"These hogs have large hams, but I don't think the meat is of such good quality. The snout and jowl are heavy too. From appearance these hogs are thick-skinned, where the others are smooth; and the hair is short and coarse."

Feed affects the quality and meat of the hog. Peanut meal, velvet bean meal, soybeans, and slops of various kinds are increasing in use as hog feeds. These feeds produce a different quality of meat than corn, and it is quite visible in the dressed carcass. The corn-fed hog, when cut, after being chilled, parts easily, and the layer of fat over the back is firm and white. The flesh is of a bright pink in color, and the meat fine-grained. The loins are shapely when cut, and the ham is deep and rich in color and flesb. Tbe layers of fat in the meat are even, and the belly is nicely streaked witb lean and fat, making good bacon.

The grass hog does not chill well, and is not firm when cut. The same condition occurs when hogs are fed principally on the feeds mentioned above, and the skin or rind is rough, and, instead of firm white fat, we have gristle. The flesh is not of bright pink, and the grain of the meat is stringy. The hams when smoked dry up, and the belly does not make good bacon.

On the whole, the percentage of the latter hog that goes over the block is much smaller than the corn-fed hog. The sausage and lard tank gets a good share, and the price of the meat is low.

Soft corn will not produce the flesh that grain of good quality will produce. This does not mean, however, that a hog, to make a fine carcass, must be fed all grain, and of the best quality. A good hog can be made on blue grass, if he is fed corn, balanced with some protein feed such as tankage. Wheat, barley, rye, peas, beans, and other feeds make good pork, but are usually too costly to feed. Barley, especially, makes a fine quality of meat, and the best bacon hogs are fed tbis grain.

It is rather difficult to detect a soft hog, especially in the North, where few of them are made. However, in other sections, especially in the South, there is a discount on soft hogs, which are usually fed on peanuts, velvet, castor, or soy beans. When a packer can't detect animals of this kind, the only alternative is to buy them with a provision for dockage if they dress soft.

These feeds can be used, however, provided enough corn is fed to harden the fat. It's being done successfully now in many sections.

"The chief thing in determining the grade of a hog," said Dr. R. J. fl. De Loach of the Agricultural Research Bureau of Armour & Co., "is the dressing percentage. This is vital to the packer, as a low dressing percentage may spell all the difference between profit and loss on the transaction. The average hog will dress around 70 per cent of the live weight, which is after the viscera has been removed, the head cut off, and the leaf fat out.

"In connection with this, let me quote the dressing percentage of all hogs killed at the Chicago Armour plant for typical winter and summer months:

	Dressing Percentage			
Month	*1915*	*1916*	*1917*	*1918*
January	70.78	67.79	68.19	68.05
February	71.22	68.36	68.56	69.08
June	70.32	69.24	68.62	69.40
July	69.95	68.30	67.99	68.83

"It will be noted that in 1915 the dressing percentages ran higher in the winter than in the summer, this heing the general rule in a normal year. The summer season is the time when droves are cleaned up, and the sows and boars, no longer useful as breeders, are marketed. Also, we get a lot of grassed hogs, and naturally the quality of these animals is not the best."

In late years the weight of bogs has been decreasing. By this I mean the average weight of the hogs marketed. The demand has changed from [CONTINUED ON PAGE 42]



Lawson's son Gilbert on the right

Lawson Grows Children Who Can Top the Market, Too

NOT every successful farmer is a successful father. We like Charles F. Lawson particularly well beeause he is *both*.

He tops the market with many of the 1,200 to 1,500 hogs he feeds every year because he studies marketing as thoroughly as he does production, and realizes that farming is a business requiring just as careful thought about costs, methods, and salesmanship as any other manufacturing enterprise. And the 600-acre, $200,000 holding which he has built up at Chase, Indiana, proves his idea is right.

He has trained his son Gilbert in the business. That Gilbert *knows* the business is proved by the offers of partnership other stockmen have made him. That he has refused them, preferring to stick by the home business, proves that the elder Lawson brought him up *right*.

We *respect* Charles F. Lawson as a successful hog man, but we *admire* him as a successful father. THE EDITOR.

How Lee Holmes Got $20,000 Worth of Food From 300 Acres of Missouri Land in 1918

By John Francis Case

LEE HOLMES, Buchanan County, Missouri, farmer, in 1917 produced $16,000 worth of foodstuffs on 300 acres of land; in 1918 food production in this farm factory had increased to $20,000.

Holmes's farm is a factory operating 365 days in the year; and, unlike most factories, it is being continually rebuilt. Holmes plants soybeans with his corn—every acre, every year—and sows clover on his wheat fields every spring. Not only does he double crop successfully, but a two-years rotation is crowded into one year. The soybeans and clover replace the soil nitrogen taken out by the corn and wheat. Two men in addition to Mr. Holmes are employed the year around.

"It isn't work that hurts folks," says Holmes; "it's worrying how to keep out of it." While taking a hand in the field, this factory superintendent finds time to plan his year's work and to act as secretary of the Buchanan County Farm Bureau. Now, how does he earn $70 an acre on the land which he owns and leases?

About the first thing done in January, 1918, was the marketing of 400 Western lambs that had been running in the corn and soybeans. These lambs had been bought in October, weighing 61 pounds each and costing $16.25 a hundred. They cleaned up every weed, ate the soybean stems two inches into the ground, and harvested the 80-acre corn crop. Sold at $17.55, they averaged 91 pounds, a net profit over all feed cost of $600. In January, too, Manager Holmes placed on feed three carloads of cattle and a herd of hogs. The cattle were just good feeders that utilized the fodder on the farm and fattened rapidly on the 40 pounds a day of silage and one pound of oilmeal fed. The silage in the 160-ton silo was a combination of corn and soybeans, too. Sold in June, the hogs and cattle showed a margin of profit that equaled the earlier sale of lambs.

Sixty of the 300 acres is in apple orchard, some of the orchards leased at $20 to $30 an acre. During January and February, Holmes and his men prune faithfully, opening up the tree tops and cutting out all diseased wood. In March one man is released for manure-hauling, oats-sowing, and clover-seeding, while the other man and Holmes assemble spraying material, overhaul the sprayer, and get the farrowing house ready for the spring pig crop. More than 100 loads of manure are scattered. An equal amount had been spread in December and disked into the ground to prevent wasting.



Working the seed bed for the wheat, Lee Holmes on the disk

April and May found the Holmes factory speeding up. Spraying had to be done on the 60 acres of orchard, the sows were farrowing, ground was being prepared for corn, and then the corn crop had to be put in. But so well was the work planned that with no additional help the three men "carried on."

With haying and harvest in June and July, and threshing and marketing the wheat crop in August, only an occasional day could be taken for rest and recreation during the summer months. And yet Manager Holmes arranged farm work so that no member of the working force in his factory, including those in the commissary department, should "go stale." Farm owner and hired hands, with the children and women-folks, took part in the Farm Bureau picnics and attended Chautauqua. When the wheat was threshed it yielded an average of 30½ bushels on 100 acres, while that of the neighbors yielded only 18 bushels. Commerical fertilizer costing $1.60 an acre to apply made the difference—a difference of $25.56 an acre in cash.

With September came silo-filling, plowing for the 1919 wheat, and, apparently the biggest job of all, harvesting the 60-acre apple crop. The trees were bending with lucious, worm-free fruit. It was almost impossible to hire capable help for apple-picking; but, like many another good business man, Holmes solved his problem by the use of printer's ink. "Apples can be had at the Lee Holmes orchards for $1.75 a bushel, tree-run," said the advertisement in the local papers. "Pick them yourself. First come, first served." September 16th, 17th, and 18th were the dates given, and when night of the last day came not one solitary apple was hanging on the trees. Holmes later advertised October 10th as the day for obtaining late apples, and on that day there were 46 motor cars and trucks in his orchards at one time. When the cash sales had been totaled it was found that this department had turned in around $4,000 in cash. And the labor problem had been solved.

With the coming of wheat-seeding Manager Holmes leased more land. Fertilizer had been ordered in ample time, and 150 pounds to the acre was applied. During October the 220 acres of wheat was sown with smut-treated seed, on a perfect seed bed, and accompanied into the soil with an abundance of plant food. The neighbors too, who hadn't "gone much on fertilizer," had been sufficiently "shown," and in all 70 tons of fertilizer had been shipped to the Holmes farm-factory neighborhood. In October began harvesting of the corn crop. Lambs were high, so it was decided that a thrifty bunch of shotes from the spring litters should be harvesters. Rapid gains were made on the corn and soybean ration, and these hogs went to market in time to count heavily on the year's production.

Construction work occupied the time during the most of November. A big concrete water tank was built, a concrete cave for one of the men put in, and a lot of minor work done. Then the machinery was to be cleaned, greased, and put away in the implement sheds. Along in November too, just to utilize roughage and feeding time before the cattle for winter feeding were bought, Manager Holmes picked up 28 thin-fleshed young mules. After these mules had been mated up as work teams and had put on flesh, they were offered in an auction sale, and snapped up eagerly by neighboring farmers at a long profit.

The closing month was occupied with manure-hauling, putting on the finishing touches on construction work, and a general tidying up of the whole farm. Every month in the year had been filled with constructive, well-planned work. It *does* pay to think out your scheme of things and have a plan.

I Find That Even a Short, Inexpensive Vacation Once a Year Makes Me a Better Farmer

By W. C. Smith

IF MORE farmers realized the benefits that come from taking a vacation, more of us would get away from our work for a few days every year. Vacation time comes when I am unusually busy, as a rule. For years, each time I would feel like I would like to get away but I couldn't find the time, so passed it up with the fond hope that the next year would be different.

Next year was never different. When I found time I felt that the money couldn't be spared, and when the money could be spared I had not the time. Of course, I have been bound more or less by war work during the past year or two, but all this is but an argument for the vacation that should come this year to each of us, farmers as well as city men.



The automobile makes a vacation easier nowdays

With the exception of the war years, I have been taking a vacation regularly every year now for several years. The automobile makes it easier now than was the case a few years ago, and there is usually a slack time just after the grain crop is threshed when it is easy to get away for a while, or it may come between the time the corn is laid by and the binder started; but, whenever it comes, it is not only good sense to get away from work and worry for a week or two, but it is also good business. I get a new vision, see my work from a new angle, learn what folks elsewhere in the world are doing, and renew not only my energy but also my spirit by getting away for a while each year.

Three years ago I decided I was going to take a vacation if such a thing were possible, and right after the threshing was over I found the time. I had lived on a central Indiana farm all my life, and none of us had been north of Benton Harbor or south of Cincinnati, and those trips were back in the days when the railroads ran cheap one-day excursions, and they could scarcely be called a relaxation from the daily work—by no stretch of the imagination could they be called vacations.

I was interested in farms and farming, and decided that I would rig up the car for a trip through a farming country and go on as far as I could, visiting such places as appealed to me. My farthest trip in the car had been down to the state fair, and I had many misgivings as to my ability to get very far away from home at anything like a reasonable expense. Most of my neighbors came in to offer advice. However, my enthusiasm held, and even infected them to the extent that a couple of them got the vacation fever and decided to accompany us.

We were mighty glad, and after we had started we hardly knew how we could have got along without them. We pooled our interests the best we could. Farm help was scarce, so we hired a reliable man between us to look after the stock and do the feeding. The milking was turned over to a neighbor, and we sailed away.

Before we stopped we had invaded the cut-over country of northern Wisconsin and had fished for bass in a dozen streams; had slept in barns, hayricks, and on the ground beside our cars; had pitched tents by the roadside and fried bacon and eggs in a pan over live coals, salted the potatoes with sugar and put salt in the coffee by mistake, and had driven our cars through Chicago, which a month before would have seemed a marvelous feat—for us.

We had never experienced anything like that vacation. It was wonderful, and some of those experiences are still paying us real dollars. We saw how others lived and worked, and we found the world a mighty good place in which to live—something we had not formerly thought much about. Up in the stump lands we found a man farming 80 acres that had never had a horse on it. He was growing potatoes, and not only pulled the stumps from his land, but also planted, cultivated, harvested, and marketed his crop with modern farm implements.



The tent was pitched under a huge oak

We learned more about soils than we knew existed, and saw sugar beets in fields of 40 to 200 acres. It was a real education.

We met a Pennsylvania farmer in Illinois and an Iowa farmer in Michigan, both seeing what the rest of the farmers were doing—tourists like ourselves. We spent half a day along the road in camp swapping experiences. We visited with a man who was keeping 150 head of milch cows, and inspected dozens of factories which were making things that interested us. We had seen tobacco growing, which to us was a new thing, had stopped at pickle patches as big as our entire farms, saw vineyards stretching for miles, and had marveled at an Illinois cornfield.

All of these things had been happening for years almost within throwing distance of us, yet for all we knew, from direct evidence they might as well have been at the other side of the earth. We talked about that vacation all winter. We had pried ourself loose from business, given ourselves and our families a treat, seen and learned much, had laughed and been laughed at and covered about 900 miles in the two weeks we were gone. And the marvelous fact of it all was that our expenses for the three families, counting the gasoline for the cars had been a little less than $150! We had always figured on vacations being very expensive. Of course, our man who fed for us had been an added expense, but the way it figured out he made us some money while we were gone, at that. We have made one cruise since then, and enjoyed it fully as well.

Now, I don't like to pose as adviser to those who have planned for a similar vacation, but there are a few things worth considering. In the first place, see that the persons who [CONTINUED ON PAGE 40]

I Grow Better Truck by Using Plain Water—and So Can You

By F. F. Rockwell

THE first thing to learn about irrigation, if you are not familiar with it, is that *you* can use it, without much expense, on any part of your own farm. It is no longer confined to vast tracts of lands involving millions of dollars.

Thousands of small and medium-sized farms throughout the country need irrigation, but don't get it. If yours is one of these, no matter what your crop, irrigation equipment that you can afford is available, and will make money for you.

Perhaps you have enjoyed looking at pictures of million-dollar dams, and reading about how the water from them grew great crops on land that never before produced anything but cactus and blisters. You can produce just as wonderful results by applying water, under control, to your own soils and crops.

Water will produce just as big crops on the soil of Ohio, or the sand of New Jersey, or the hillsides of New England, or the muck bottom land of the big Eastern river valleys, as it will in any irrigation country. I know, because I have seen the results under dozens of different conditions, and because I have got them myself under the most unfavorable conditions.

The photograph of the heads of cabbage at the end of the article is not "touched up" by the art editor. It shows heads from the first crop of cabbage I grew under irrigation on a dry, sandy, gravelly hillside, which had never before matured even a crop of early tomatoes or sweet corn. The only thing that could survive the summer on that stretch of ground was witch grass, and even that would curl up and shrivel at the end of about the second week of dry weather—the kind of soil through which rain will travel faster *after* it hits the ground than before.

Well, that crop of cabbage was at least three times as heavy as the best crop I had ever grown without irrigation on my best soil. And I know that the irrigation did it, because the irrigation lines did not reach quite to the ends of the field, and beyond them the heads were barely worth the cutting.

Profits Depend Upon Water

Of course, overhead irrigation in the humid regions is not as much of a novelty as it was ten years ago. Irrigation in the East and Middle West is not known to a great many growers. Of course, the war and the increased cost of pipe and work has retarded the introduction of irrigation to a considerable extent, although a good many growers, realizing the prices for produce has gone up fully as much as irrigation equipment, have gone ahead enlarging their plants.

You know, of course, that nitrogen, phosphoric acid, potash, and limestone must all be supplied to your crops in generous quantity if you expect a full harvest. And that a shortage in any one of these things will pull down the total yield.

But there is something that is more important which perhaps has not been impressed thoroughly upon you, and that is the fact that in nine cases out of ten, under ordinary conditions, *the real factor in crop production is water.* No matter how rich the soil, or how good the cultivation, the size of the crop is absolutely limited by the amount of moisture in the soil. If you had to *buy* water, and there were a national association of water manufacturers interested in seeing that you were told why water is necessary, and how profitable it would be to secure it in liberal amounts, then we would perhaps realize that it has a real money value.

In modern methods of agriculture $10 to $100 an acre—and in the case of market gardening sometimes a great deal more than the latter figure—is spent to fertilize the soil for a single crop. And yet it is very rarely a case that there is sufficient rainfall to grow a maximum crop—100 per cent of what that fertility is capable of producing. *With other conditions right, the total yield will depend absolutely and directly on the amount of water supplied,* up to what the crops can make use of. Without moisture the most carefully fertilized crop, in the best of soils, will die.

With only half enough moisture, while the crop may "pull through," it will not be the kind that brings profit. And for every single gallon of water lacking to transfer the plant food from the soil, through the root system and into the plant, the possible profits on that acre are proportionately cut down toward the vanishing point.

Another thing that is not fully realized is this: Abundance of water is necessary, not only to save crops from the absolute ruin of prolonged drought, but also to make them grow better in ordinary seasons. Frequently the amount of money spent in fertilizer and manure alone, if it were divided, and spent half on fertilization and *half on water,* would show a most decided increase in the profits.

When it is realized that for every pound of solid matter added to the crop there is taken up through the root system and evaporated through the leaves, from *500 to 800 pounds of water,* then one begins to see that water is a factor that should be given careful consideration, and why it is just as much good business to spend money on water as it is to spend it on good seeds, fertilizer, or modern machinery. Deep plowing and frequent cultivation may conserve the moisture in the soil, but they are absolutely helpless to *add* a quart, and when the total rainfall is insufficient for the crop's needs it is then evident that no amount of conserving will answer the purpose.

What Kind of Irrigation Will Fit the Average Farm?

There are many growers who have already realized these things, but do not know which way to turn to get away from the uncertainty of depending on the eccentricities of natural rainfall.

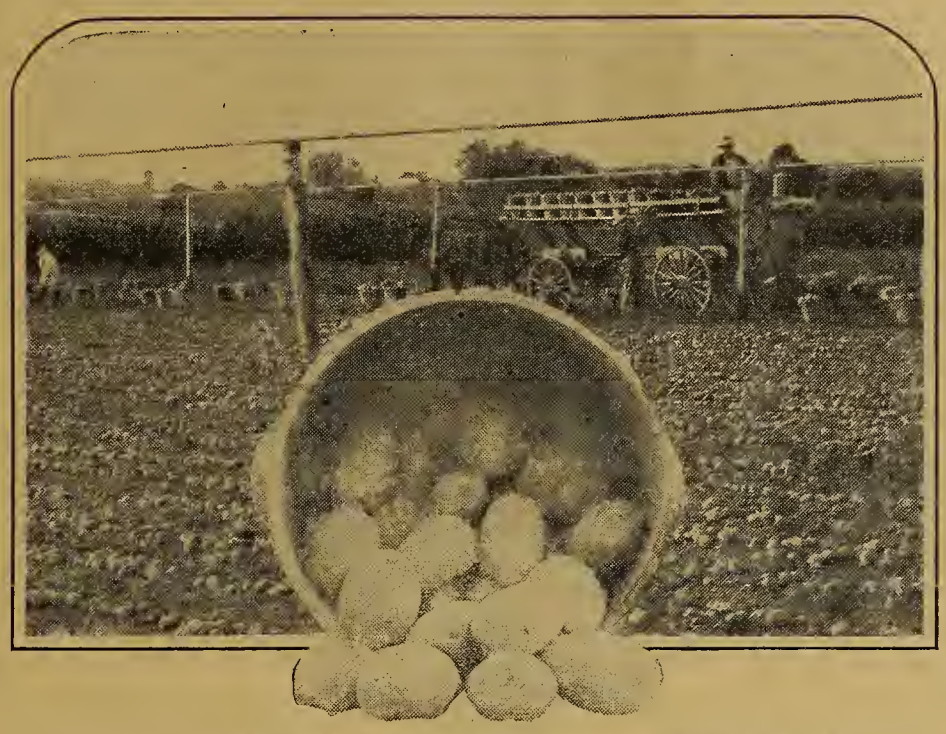
Anyone who has ever been through the experience of putting in weeks of toil and every dollar that could be spared, in the preparation and early cultivation of a crop, only to see it gradually slaken down and curl up beyond any hope of returning even the cash outlay, to say nothing of labor and profits, need not be told what it is to go through such a crop bankruptcy. But what to do about it has been "something else again."

The value of any system of irrigation that can be of practical importance to you must be rated on the following three points:

Availability, efficiency, economy.

The overhead system of irrigation, especially the nozzle-line type, has the tremendous advantage that it can be used anywhere, and on any lay of land—a dead level muck meadow, or a stony, uneven hillside.

That means that any grower who wants it can get all the unquestioned advantages of irrigation, and at the same time stay right at home at the door step of his market, and where he is familiar with local conditions and the crops to be grown. The advantage of doing this, as compared to pulling up [CONTINUED ON PAGE 32]



Early potatoes "under water"—nearly 1,000 baskets per acre. An unirrigated part of same field yields about 300 baskets

Do You Have to Pay for Your Ticket to Appreciate the Show?

MARK TWAIN once stood on the street corner and tried to sell a five-dollar gold piece for fifty cents—just to prove that it couldn't be done. He proved it. Nobody would buy.

That's human nature. Offer a man something good for little or nothing and he won't take it. Why? Because all the really good things in this world that men can organize and sell have a good round price set on themselves, and the average man knows it. Hence—and rightly—he is suspicious.

But there are a few natural gifts of God that can't be organized and sold, or that may be had very cheap. Chief among these are air and sunshine—and water. As Rockwell points out in this article, many of us fail to appreciate the true value of water because it's so easy to get.

As we get very little for nothing in this world, it's a good idea to take what we *can* get.

THE EDITOR.



Part of the 600 acres of overhead irrigation at Seabrook Farms, Bedgton, New Jersey. Seabrook Farms started with a couple of acres, skeptical as to results

What I Learned as a Boy That Helped Me Succeed as a Man

By George McKerrow

IF THE editors of FARM AND FIRESIDE had not suggested that the story of my success with live stock might influence youthful workers along similar lines to persevere and overcome obstacles, I would not be writing this. However, with that object in view, I will set down some of my youthful ambitions—which, in a measure, have been realized—and try to tell you what I have learned that may be of value to you and your children.

I must admit that in my boyhood days I had a liking for the income from my little flock as well as a love for its individual members. When my boys were growing up and were given a financial interest, they went at their work with renewed energy and a greater interest in its details. I have noticed the same results in many other cases. All of which prompts me to say: Give the boys and girls a chance.

During these progressive days of boy and girl calf, pig, and lamb clubs, under a systematic system of local and state management, the young people are working under much more favorable conditions than prevailed fifty to sixty years ago. From my own early experience in starting my live-stock work, and the later experience of developing a love of good live stock in my own sons, I feel that parents should aim to work with the children in every move, not only taking an interest in their work, but also in backing them in a financial way and in giving them a financial interest.

When I was called to take charge of the Farmers' Institute work in Wisconsin, and finally accepted with many misgivings as to the outcome of my own stock-breeding operations, I soon found that my absence from the farm for several days at a time was not so much of a detriment as I had anticipated. Our two boys, then ten and twelve years of age, with their mother's advice and help, developed an ability to manage and do business at such a rapid rate that they surprised me.

When I was young and just starting in the stock business, I used to think sometimes that lack of capital was my serious drawback, but have since concluded that it may have been a good thing that I was poor. It caused me to learn the business in all its details from the ground up as I was slowly developing the pure-bred herd or flock. It is a good idea for the youngsters to do the actual work with the flock.

The necessity of having to feed, shear, trim, dock, and perform every detail with the flock taught me a lesson that I never could have learned if I had been depending on others to do the work. My best teachers in sheep husbandry have been the actual work at home and in the show rings and the pointers secured by contact with the English and Scotch shepherds at work among their flocks.

I no doubt inherited my love of animals from my Scotch ancestors, and had it further developed by my English stepfather, who had been a foreman on a live-stock breeding farm in Yorkshire, England. My education in live-stock began when eight years old, by an investment of two dollars—all my capital—in an old ewe with no teeth on either her upper or under jaw in front. With eleven others of the same class we began the sheep business on our 80-acre farm, whose cleared acres were nearly exhausted of their native fertility by a continual system of wheat-growing, so common in southern Wisconsin then.

The fact that I was a stock owner, and was to work for the old ewe's board by caring for the little flock as its shepherd, gave me a new sense of responsibility and an incentive to learn all I could about the business. The "American Agriculturist," Randall's work on sheep, and a little later the "Live Stock Journal," then the "Breeders' Gazette" and the "American Sheep Breeder," I read and reread. Nearly all of their suggestions were tried out in an experimental way to decide if they were suited to our plan of work.

The old ewe proved a good investment, as she produced me two ewe lambs the following spring, and laid the foundation for a good grade Merino flock.

When I was twelve years old, an uncle, William McKerrow, who was managing a 1,000-acre farm in New York, came West with a carload of pure-bred Merino rams of very good breeding. When I saw him selling these rams at $75 to $300 each, I decided that I would become a breeder of pure-bred sheep some day, if the good Lord left me on earth long enough to carry this ambition into effect. This was my start.



Photo from George McKerrow & Sons Co.

WHEN you think of sheep you think of George McKerrow. He is known and looked up to wherever sheep are grown throughout the world. If you have ever been to a live-stock show of any consequence, anywhere, you have seen him, for he is always there. And no one has done more to put the live stock of America on a pure-bred basis than McKerrow.

He has made more than fifteen trips to England and the Channel Islands, in the interest of importing better live stock to this country. In addition to that and his regular business of farmer and stockman, under the name of George McKerrow & Sons Co., at Pewaukee, Wisconsin, he has found time to serve as superintendent of the Wisconsin Farmers' Institute (and also as editor of the annual bulletin) for twenty years. He was also president of the Wisconsin State Board of Agriculture for thirteen years, and has served in the capacity of president for the Wisconsin Dairymen's Association. Withal, Mr. McKerrow is a likable, modest man who dislikes very much to talk about his own accomplishments. We would not have had this article from his pen had it not been for the fact that we told him such an article would probably be helpful to other young people starting on their life-work.

One day when a very successful farmer of Scotch origin and live-stock education was trying to buy one of these good rams at a reduced price, I heard my uncle drop two remarks that impressed me so much that a little later I adopted one of them as my business motto:

"The best are none too good."

The other, "The sire is half the herd or flock," always comes to my mind when selecting a herd or flock leader.

These statements were acquiesced in by this shrewd Scotch breeder, and evidently acted on, as he became the purchaser of one of the best. We bought an aged ram from this lot that had proved an excellent sire in the New York flock, also two of the choice ram lambs, and a little later a few pure-bred Merino ewe lambs, and laid the foundation of a pure-bred flock.

This gave me a new incentive to study the question of pedigrees, family lines, and quality of individuals, coupled with breed, type, and character. When sixteen years old I began buying stock to sell on the Milwaukee market, and learned many things about meat animals that I had only hazy opinions on before. I found that the sheep with the middle wool fleece had the best quality of mutton. The fine-wooled Merino was all lean, and when fat their tallow was massed around the kidneys and stomach. The coarse, long-wooled sheep went to the other extreme of too much tallow mixed with the lean.

The middle wools we had in those days were a cross between the Merino and the long wools, such as Leicester, Cotswold, or Lincoln. I began handling some of these long wools about this time, and found the cross-breds of the middle-wool type a very good sheep; but when a second and third cross was made, too much tendency to tallow in the carcass and coarseness of fleece developed.

I then decided, as the country grew older good mutton would become the chief source of profit, and good wool a strong second consideration; and that my life would be too short to develop a middle-wool breed from the cross-breds (Corrisdales) and bring them to any great uniformity.

I now cast about for the best middle-wooled breeds that would meet my ideals. I first tried the Oxfords, and found them so satisfactory that we are still breeding them, some forty years in all. For over thirty years we have had America's leading flock in this breed, as demonstrated in the leading show rings, including two world's fairs.

For over twenty years I had the champion flock of Southdowns, and for nearly thirty years we have been developing a flock of Shropshires along family lines that now rank second to none in show-ring performance and sale-ring averages—the Senator Bibby and Bibby Champion family that we have developed in this breed is known from Canada to the Gulf, and from ocean to ocean.

My show-yard career with sheep began at fifteen, when I won a first prize on a pen of three Merino ewes at the Waukesha County Fair over pens that had won first and second at the Wisconsin and other state fairs in the Middle West. This aroused my ambition to become not only a breeder of the best, but showman as well.

One thing I very soon learned in my show-ring career was that first you must have animals of *type* and *quality*. And that is only half. The other half comes in the proper fitting so they reach the show season in the very pink of condition—not stale and overdone by too long or heavy feeding, nor underdone by a poor system of feeding; of the two I would prefer to have them a little underdone.

I believe the show ring is one of the very best educators for the breeder, as well as an excellent advertising medium. I soon reached this conclusion, and after over fifty years of experience in the show rings of America and Europe I am fully convinced of its truth. Some of the best lessons have been learned in and around the show rings. I began breeding pure-bred stock in a small way, because my capital was very limited and I could only purchase one, two, or three at a time. I never bought inferior animals because they were low in price. I have often bought those that were rather low in condition, but had the conformation and indications of health with good breeding that prompted me to decide I could make good ones of them with proper care and feeding; and good judgment in breeding soon developed good families.

I have paid long prices for well-bred and well-developed males, most of which have been good breeders; but I must say that our best sires have been either bought at moderate prices—some people would call them high prices—and selected because of good pedigree and good conformation of themselves and their sires and dams, or have been bred by us from our best family lines.

The highest priced sires we have bought in England have cost us $500 to $650, while we sold some of our own breeding at $200 to $370, and one-half interest in two of our best home-bred sires at $500 each, one of them at five years old, and the other at three years old, and a one-half interest in two others at $250 each, when three and five years old.

One of my early ambitions was to develop my flock of each breed that I handled into one of the best of its class on the American continent. In fact, this ambition was so strong that it became a resolve. In carrying out the idea of my business motto, "The best are none too good," I began to survey the best flocks not only in this country, but also in other countries where those breeds are kept. This led me into the importing business.

[The editors would like to add that Mr. McKerrow's ambition has been realized, as is shown by the average records of the leading American show and sale rings.]

The best selections from the leading flocks in Canada and Great Britain have annually been drawn upon for many years. I found that it only pays to import the best. Sometimes I have been tempted to buy animals of only medium quality, because of a comparatively low price and a demand by some customers for low-priced stuff than the best individuals could be furnished for. In nearly every case I have regretted such a purchase.

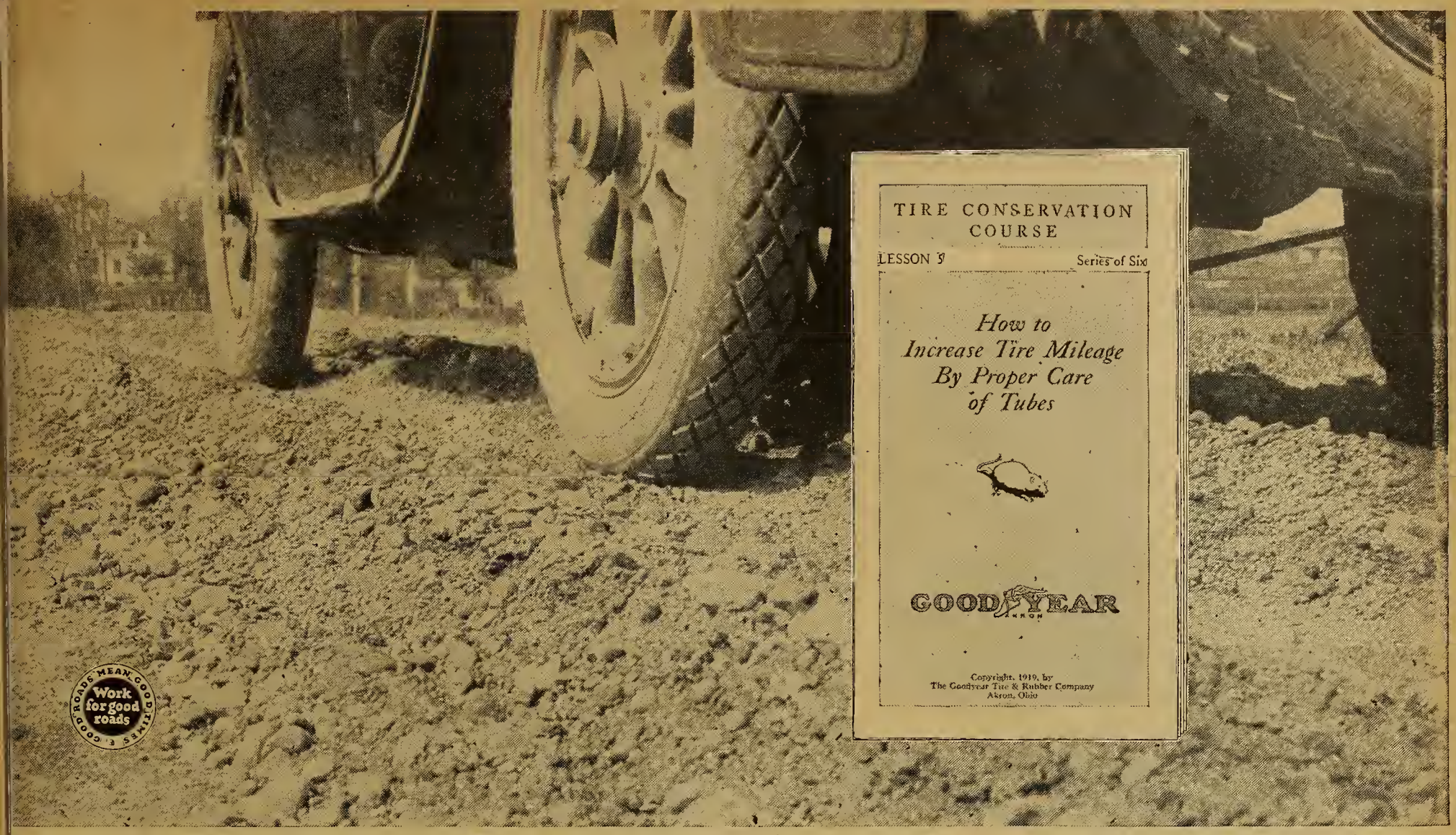
Once while buying cattle for export on the Island of Guernsey, a breeder said to me:

[CONTINUED ON PAGE 5



Photo from George McKerrow & Sons Co.

Senator Bibby Second, champion ram Minnesota and Wisconsin state fairs, 1914



A Few Hundred Yards May Cost 10,000 Miles

A MAN with a new car had one of his tires blow out. He didn't have a spare, so he decided to run a few hundred yards to a friend's house. When he got there he discovered that neither the tire nor the tube were worth repairing, for running on the rim had fractured the casing fabric. And the tube was riddled with holes caused by being pinched against the rim. Those few hundred yards of running on the rim probably cost him 10,000 miles—miles that could have been saved by properly caring for the tube. Proper care of tubes saves miles in many other ways—not only in emergencies but all the time. Ask your Goodyear Service Station, or write to Akron, for Lesson 5 of the Goodyear Conservation Course—telling how to increase tire mileages by proper care of tubes.



Repairing a tube with a Goodyear Tube Repair Kit

PROPER care of tubes increases by thousands of miles the life of even the best of tires.

For whenever a tube fails, the casing is seriously damaged by being run flat.

Only a few hundred yards of such running may utterly spoil the tire; and even if the tube merely has a slow leak the tire will suffer the inevitable injuries due to under-inflation.

Take care of your tubes, if you wish to get the most from your tires.

Tubes inserted in the casing without being properly talced, either stick to the casing and tear because of the lack of French Talc or—when too much of this lubricant is used—they are injured because the talc collects in puddles and hardens.

Tubes must be properly inserted in the casing; otherwise they will be pinched against the rim, or—if the valve stem is at an angle—they may be torn.

Punctures from the inside must be prevented by cleaning all sharp dust and grit out of the casings, and by keeping the rims from rusting and "flaking" off.

Lesson 5 of the Goodyear Conservation Course gives simple but detailed directions for making your tubes serve your tires.

It also tells how tubes can be repaired permanently and in a few minutes with the Goodyear Tube Repair Kit.

Ask your Goodyear Service Station to show you one—and ask also for the other lessons of the Goodyear Conservation Course.

The Goodyear Tire & Rubber Co.
Akron, Ohio



The tube repaired and ready for talcing

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AKRON
TIRE SAVERS

Champion
Dependable Spark Plugs

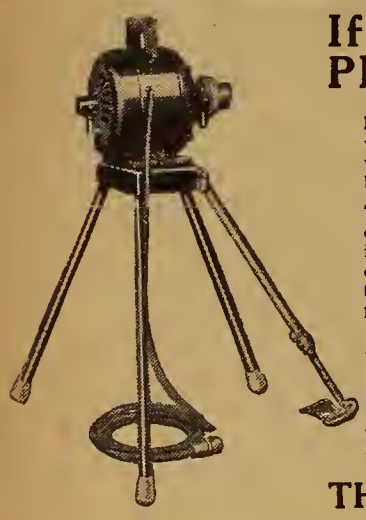
Champion Dependability Has No Substitute

THE heavy demand for Champion *dependability* made and keeps Champion Spark Plug *production* the largest in the world.

The greater resisting power of our famous number 3450 Insulator to temperature changes, shocks and vibration, together with our patented asbestos gasket construction, are a few of the reasons for Champion dependability. There is a Champion Spark Plug for *every* type of motor car, motor truck, tractor, motorcycle and stationary engine.

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If You Own a Farm Lighting Plant You Need This Motor

If you could hire a strong man to do the chores and he would cost you only about a month's wages—and would work for a few cents a day after that—you would hire him mighty quick, wouldn't you?

That is all the Robbins & Myers Special Farm Motor will cost. It can be used in connection with any Farm Lighting Plant. This motor will furnish power to wash the clothes, churn, turn the cream separator or ice cream freezer, saw the wood, turn the grindstone or fanning mill, pump the water—in fact, perform all the odd jobs about the farm and home which require power.

With efficient labor so scarce, this motor will easily pay for itself in a short time and make life on the farm more comfortable for all the folks.

Send today for the free illustrated booklet describing this motor, also other types for farm service, and giving prices.

THE ROBBINS & MYERS COMPANY
DEPT. 523 SPRINGFIELD, OHIO

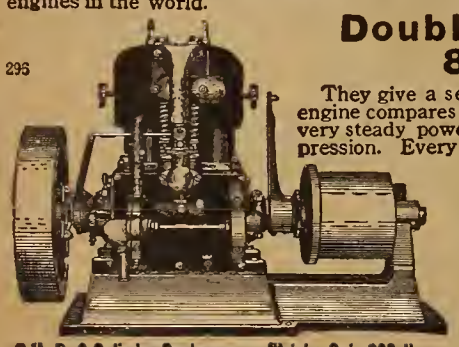
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Light Weight All-Purpose Farm Motors
Weigh Only One-Fourth As Much

as ordinary farm engines, but run even more steadily and quietly, because of perfect balance and accurate Throttling Governor.

Because of their light weight, they are the most useful farm engines, as they can be moved so easily from job to job, doing many jobs other engines cannot do.

They are also very durable—in fact, the Cushman service record on American farms—where 50,000 of them are at work—justifies our claim that Cushman Motors are the most durable farm engines in the world.



Double Cylinder Motors
8, 15 and 20 H. P.

They give a service the tractor cannot give and no other farm engine compares with them in equipment. Two cylinders give very steady power. They do not wear unevenly and lose compression. Every running part protected from dust and properly lubricated. Equipped with Throttling Governor, Carburetor, Friction Clutch Pulley and Water Circulating Pump without extra charge.

Cushman Engines are not cheap, but they are cheap in the long run. Ask for Free Book on Light Weight Engines.

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8 H. P. 2 Cylinder Cushman. Weighs Only 320 lbs.

What's Wrong With Farming?

[CONTINUED FROM PAGE 5]

perhaps a slightly, a very slightly, increased hazard to life, offset to a considerable degree by easier hours and healthier conditions of work.

But the citizen farmer who lives in the same community with the miner, whose children grow up with his own, and who is manager in a small way, competing in the labor market, must invest in land and buildings, tools, and live stock. He must pay taxes and insurance and repairs and veterinary fees. He often must work sixteen hours, seldom less than ten, and he must be on duty day and night, ready always to care for his independent plant.

But, you ask, what has stirred the farmer up to all this desire for more consideration? Why is he dissatisfied? We understand perfectly well what the mass of Americans do not know—that, until about the opening of the present century, men, women and children worked willingly, and often cruelly, without money and without price for the sake of developing out of nature's raw material a home of their own. That opportunity has now gone, and with it the impulse to labor for something better than money. Hereafter the farmer, like other people, will have to reckon his income in terms of cash.

The wave of land hunger now going up over the country is but the premonition of what is coming if it is to remain as difficult as now for country-minded young families to obtain, within a reasonable period, homes of their own.

The home-building instinct is not only the greatest known incentive to work, but it is also the safety clutch for democratic institutions.

Under existing conditions farmers will do one of two things: require financial returns comparable with those of other people, or settle back upon the primitive self-sufficing system, producing not a supply, but a simple surplus over their own needs. In either case more expensive food is inevitable—in the one instance from an increased initial cost of production, and in the other from a reduced supply.

And we must go farther in our national plan than to make it easy to acquire ownership in land: we must care for this land as a national asset and as a perpetual obligation, in the interest of future Americans. Ownership means at best but temporary control, and whoever carries in his pocket a deed to a portion of the national domain is in reality a tenant at will, and the conditions of his tenantry should be such decent regard to the fertility of the land he occupies as shall insure increasing, not decreasing, productivity.

After all, who is the farmer? And where is the land which he wants? To attempt to answer this question brings us very near to the crux of the situation. Not far from half the acreage of our better lands is owned by one group and operated by another. Who then is the farmer? When two families are attempting to live off the same farm, one of them in idleness, or when eleven families are living off ten farms, with whose interests do those of the public lie?

In one county of Illinois, 20 per cent of the farm lands are said to be owned by men who have never seen their properties, because they live with other interests on the Atlantic seaboard, collecting rents through agents as they clip coupons from stock certificates.

It is said that the estate of Lord Scully is just now raising the rents of some hundreds of thousands of acres of our best prairie land to $10 an acre, or about 2,000 per cent annually of the original cost. Investments and betterments? Not a dollar! For the agent is instructed that if the renter wants a house or a pigpen let him build it. No investments except in additional land. Here is a mare's nest for hatching trouble, and the tenants are already reported as organizing for resistance.

We shall always have renters, but shall renting and landlordism become typical in the country as it is now in the cities? If so, in that direction lies trouble.

Among the achievements necessary to insure the proper development of American agriculture, whether from a private or a public point of view, the following at least are of sufficient significance to be considered as fundamental in a national policy:

First—Subsidizing of country schools to an extent that will insure to every child born upon the farm the opportunity of a good high-school education admitting to college.

Second—Public recognition of the fact that the farmer is neither a capitalist nor a laborer, as the terms are understood in the commercial world, but a managing operator of a small business of which the home and family are integral parts.

Third—Recognition of the fact that the American farmer, as a typical citizen, representing our largest and most fundamental industry, and as our greatest home builder, is entitled to an income comparable with his labor, his investment, and his managerial skill.

Fourth—The assurance of this income, not by arbitrary price-fixing in definace of the economic law of supply and demand, not by force, but by conference between producer, distributor, and consumer.

Fifth—Requirement by law of minimun housing conditions upon rented farms, such conditions to be maintained under a system of adequate inspection.

Sixth—The obligation not only to maintain but also to increase the fertility of land, this obligation to be equally binding upon landlord and tenant and enforced by public license.

Seventh—Recognition of the fact that as between the owner and the operator of the land the sympathy and support of the public should be with the operator.

Eighth—Recognition of the fact that as between the owner-operator, the tenant, and the speculator, the sympathy and support of the public should be with the owner-operator as the typical farmer.

Ninth—The elimination from the public mind of the idea that tenantry is to be regarded in American as typical land occupancy or as the ideal road to ownership, theories for nationalization and mutualization of land to the contrary notwithstanding.

Tenth—The appropriation of public funds for financing young men in prospective ownership as soon as they shall have fully established a reputation for thrift, and shall have accumulated, say, 10 per cent of the purchase price of productive lands.

Eleventh—The establishment of interest rates on funds loaned upon land for home-building purposes that shall be based upon those of the most favorable bond issues, not upon current banking rates for short-term loans—rates that cannot be generally paid in farming, and that ought not to be paid in the business of producing the staple foods.

Twelfth—Discouragement of speculation in land by means of graduated taxation, and, if necessary, by prohibiting the accumulation of large numbers of farms or other acquisition of land with no intention of occupancy.

Thirteenth—Recognition of agriculture in all its phases as a matter of deep public concern.

Fourteenth—Finally, the determination to maintain upon the land the same class of people as those who constitute the prevailing type among the mass of American citizens.

He Likes Real Milk

ONE day last summer some poor children were permitted to go over a stock farm which is located in the outskirts of Philadelphia, and when their inspection was done, to each of them was given a glass of milk.

The milk was excellent. It came, in fact, from a $2,000 cow.

"Well, boys, how do you like it?" the farmer said, when they had drained their glasses.

"It's fine!" said one little fellow. Then, after a pause, he added, "I wish our milkman kep' a cow."—*Baltimore Sun.*

The following is an extract from a soldier letter, repeated by a censor who had a sense of humor:

Somewhere in France.

DEAR MA: I have saved a little money, and when I get back home I'm goin' to buy me two mules, and name one of 'em Corporal and the other one Sergeant; then I'm goin' to lick hell out o' both of 'em!

—*Carry On.*



The Winchester Pattern. 320 pellets out of a possible 431, or 74% of the shot charge, evenly distributed; no birds get through.

How big a bag will *you* bring back?

THE difference between a bulging bag and a lean one is often a question of gun and shells and not of shooting skill.

Make sure you have the right game-getting combination—shells that kill when the aim is true, and a gun that enables the shell to make its best pattern.

Good shell patterns are either *allowed* or *prevented* by the character of the gun barrel—the chamber, bore and choke.

Faulty chambering even more than faulty choking tends to mash and "ball" the shot, making pellets fall short or fly wide.

And if a gun is faulty in its most vital part, the chamber, the chances are that the bore is also carelessly made.

From chamber to choke, the barrels of the famous Winchester Repeaters are bored to make the shell throw its highest pattern. They are free from shot-jamming defects. They let the shell do its full work.

"Line" test the barrel

Point a Winchester barrel toward the light and look through the bore. It looks like a highly polished mirror. Not a false shadow throughout the bore. Sight through the bore at a horizontal black line on the window. This line will throw a "V" shadow in the bore. Tilt the barrel till the point of the "V" touches



The "Line" test

Perfect bore of Winchester barrel revealed under "Line" test.

Irregularities revealed in inferior shotgun barrel under "Line" test.

the muzzle. The perfect "V" shows absence of irregularities.

This is the "Line" test of a perfect bore. No faulty barrel can pass this test—the "V" will be distorted.

What (P W) means

This mark on a Winchester barrel means that the gun has passed the "Winchester Provisional and Definitive Proof" test, having been fired many times for smooth action and accuracy, and strength-tested by firing 25 to 40 per cent excess loads. This stamp stands for Winchester's guarantee of quality, with 50 years of the best gun-making reputation behind it.

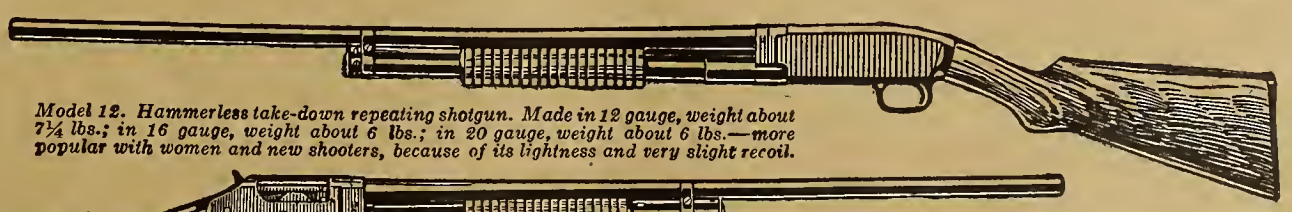
Your dealer will show you Winchester Guns and Ammunition

Before you take to the woods this Fall, get your dealer to show you a Winchester Repeater—Model 97 for hammer action; Model 12 for hammerless. Put one to your shoulder, try its balance, see how beautifully it handles. Your sportsman's instinct will tell you it's the best weapon you could choose. Leading hardware and sporting goods dealers in every community carry Winchester Arms and Ammunition. They will be glad to assist you in selecting the gun best suited to your needs. Upon request, we will mail you, free of charge, the complete catalog of Winchester guns and loaded shells.

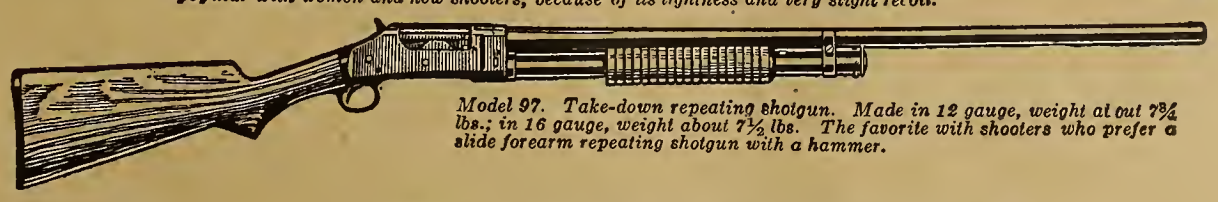
WINCHESTER REPEATING ARMS CO.
Dept. 123, New Haven, Conn., U. S. A.

Important Notice

The chamber, bore and muzzle choke of all Winchester Shotguns are *reamed* to micrometer measurements for the particular Winchester Shells they are meant to shoot. You will get the highest and most uniform pattern results by shooting Winchester shells in Winchester guns. The two are made for each other.



Model 12. Hammerless take-down repeating shotgun. Made in 12 gauge, weight about 7¼ lbs.; in 16 gauge, weight about 6 lbs.; in 20 gauge, weight about 6 lbs.—more popular with women and new shooters, because of its lightness and very slight recoil.



Model 97. Take-down repeating shotgun. Made in 12 gauge, weight about 7¾ lbs.; in 16 gauge, weight about 7½ lbs. The favorite with shooters who prefer a slide forearm repeating shotgun with a hammer.

WINCHESTER

World Standard Guns and Ammunition

The Salisbury New Rear Axle



Pressed Steel Standard Type

"Always Safe"

AN automobile is only as good as its *rear axle*. Remember—you may have the best engine in the world in your car but that does not and cannot make it a *good motor car* unless the *rear axle* is mechanically correct and physically perfect.

Few people realize that the *rear axle* of an automobile is, next to the engine, the most important mechanical factor in producing a good automobile. The engine's power is transmitted to the rear (driving) wheels through the pinion gear of the propeller shaft and differential mechanism—all part of the *rear axle*.

The *rear axle* of a carriage or wagon carries the weight of the vehicle on the spindle. The *rear axle* of an automobile carries the weight of the vehicle on its *housing*—the pressed steel case which encloses the differential gear, driving shaft and all bearings—and includes the wheel hubs, brakes and brake mechanism complete ready for use.

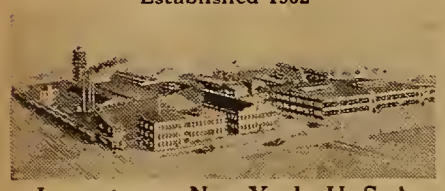
One may better understand the importance of the *rear axle* when it is said there are over 150 individual parts of the *rear axle* mechanism that must be carefully machined and fitted to micrometer measure. This mechanism must be compact, silent and of great strength to transmit the power of the engine to the driving wheels with the least possible friction or loss of power.

The Salisbury New Pressed Steel Rear Axle is produced in our two big plants after 15 years' successful building of front and rear automobile axles, complete with hubs and brakes, for the trade. It combines the great strength and durability of our own special formulae steel with simplicity of construction.

Made in three standard sizes for cars weighing 1700 to 4000 pounds.

The manufacturer who specifies our axles adds a strong selling point to the prospective purchaser.

SALISBURY AXLE COMPANY
Established 1902



Jamestown, New York, U. S. A.

PERU AXLE COMPANY
Established 1909



Peru, Indiana, U. S. A.



HERE is the tractor of utmost economy, the tractor that gets most from every gallon of fuel because the direct drive from motor to both rear axle and belt pulley saves power.

THE HUBER Light Four

is the right sized tractor for every sized farm. It is powerful enough to pull three 14-inch bottoms and turn an acre an hour, and light enough to work on plowed ground without packing it down.

Thousands of Huber Light Fours are in successful use. It is the tried and proved tractor. Huber owners are Huber boosters. For 40 years Huber has built steam tractors; and for 20 years gas tractors. The Huber Light Four is the best tractor Huber ever built.

It plows, harrows, drills, pulls a binder—does every type of heavy field and belt work *economically*. So simple a boy can run it, and anyone who knows an automobile can keep it in repair.

Every one interested in tractors should read the "Traetor in the Making," a reprint in booklet form. Tells vitally interesting facts about tractors. It is free for the asking. *Write for your copy today.*

Weight 5,000 pounds; pulls three 14" bottom plows; 12 h. p. delivered to the drawbar; 25 h. p. at the belt; Waukesha four-cylinder motor; Perfex Radiator; Hyatt Roller Bearings; burns gasoline, kerosene or distillate; center draft; two speeds, 2½ and 4 miles per hour.

THE HUBER MFG. COMPANY
202 Center Street Marion, Ohio
Makers of the famous Huber Junior Thresher
Some territory still open for live dealers

Eight Big Points to Watch

[CONTINUED FROM PAGE 7]

production record. It has been proved that the best-producing cows would never be placed at the top of the list on appearance alone.

To continue selection merely by appearance for two or three years, the chances are you will have corn which is just the opposite to what you want.

A farmer hasn't the time nor opportunity to experiment to breed up a high-yielding variety of corn in his own field. It is a long-time proposition, requiring years of careful study. Thousands of ears are tested during this time before an ear is found which has the inherent power to reproduce itself and give to its offspring a high-yielding strain of corn.

Every time we tackle a proposition of this kind we only plant half the ear, retaining the other half for planting the following year. By eliminating the weak-producing ears, and mating the strong ones, we are able gradually to raise the standard of production.

And, for the same reasons stated above, I have found that the corn which is the heaviest at picking time is not always the heaviest when it is taken out in the spring for the germinating test. The moisture content of some corn is greater than others.



Taking a drink to Father out in the field

In picking corn I like to get the ears on stalks about four and one-half feet from the ground. Of course, the location of the ear varies with the variety. Yellow Dent, which is the most popular corn for marketing purposes, has the ear about this height on the stalk.

The variety of corn grown by the farmer depends upon its use. If the corn is used for hominy, naturally it is white; for feeding hogs he wants a variety which matures early; for silage he wants a late-maturing corn, which has a heavy growth of foliage, ear, and stalk.

I prefer to pick the seed from a hill which has no suckers. Suckers, by the way, are a sign of an unbalanced soil—too much nitrogen and not enough phosphorus.

Moreover, I would not pick an ear from a hill which has smut or *Fusarium* in it, or near it, because this ear is likely to be infected even though it does not show it to the naked eye.

I have found that the average farmer insists on too big an ear for his own good. However, it is human nature to look for the biggest things in life. A man planting corn from a big ear expects it to produce a big ear, but in the majority of cases he is due to be disappointed. Too large an ear means a late-maturing plant.

Abnormal ears are not good, and I'll explain why: Sometimes during the growth of the stalk there was some trouble. Nature has a way of trying to remedy these troubles and in this case it may have sent up an abnormal supply of plant food to correct the defect. The result is a mighty big ear. This is an abnormal and bad condition. I find the offspring of such an ear is generally weak.

I pick a medium-sized ear. Our motto is a medium-sized ear on a maximum number of stalks. An average ear with me is 9 to 10½ inches long, and the circumference is approximately two thirds of the length. I like to have the rows straight, because this shows careful selection and breeding in the seed which produced the ear in question.

In years past it was hard to find straight-rowed ears, and even to this day some varieties of corn are known by the characteristic of crooked rows. The crooked row does not prejudice me against the ear.

An average ear weighs about 14 ounces when it has a moisture content of 15 per cent, and weighs about 18 ounces when the water content is 22 per cent. The average ear which I pick for seed, at the time, will measure 10½ to 12½ inches in length, and this will shrink from one to two inches when dried.

This is another point which is not always observed by our customers. They don't realize that corn shrinks, from both ends as well as in circumference, and that the shrink affects the kernels too.

We test our seed corn for our intensive breeding plots three times before planting, taking ten kernels from each ear every time. A germination of 95 per cent is O. K. for the farmer, but we must have 100 per cent.

The best time to test corn is after the holidays. I do it then, and the farmer should do so too, if his corn does not show a good percentage of germination. He will then have time to get and test new seed.

Apple-Barrel Advertising

By E. W. Gage (New York)

DID you ever advertise your orchard business in your apple barrels? I have found it pays, and pays big. Just slip a card in the top of the barrel or box, and when the consumer opens the package he will shake hands with pleasure. There is a touch of romance in knowing just where a package of fruit comes from, and the consumer's faith is instantly strong for the farmer who is not ashamed to have the purchaser know who produced and packed the apples.

Although the consuming public demands higher grade fruit each year, few of the city folks know the qualities of each variety, or the best means of keeping these varieties. Few city housewives know the difference between the McIntosh, for example, for dessert purposes and the Tolman Sweet for baking.

In the matter of keeping, too, few consumers of apples are aware of the absolute necessity of keeping the winter stock of apples in a room where the temperature is not above 40 degrees, and as near freezing as is safe. There is also great carelessness in exposing fruit to a dry atmosphere. An atmosphere saturated with moisture will do no harm to a sound apple; moisture is essential to keep many varieties in good condition.

Fruit growers who have adopted the plan of placing cards in their fruit packages have reaped harvests of increased s[ales] built on the satisfaction which their fully packed fruit gave in other years. T[his] is direct-to-the-consumer sales, w[hich] mean highest profits to the grower.

The following are a few suggestions [for] cards for placing in apple containers w[hich] should be descriptive of the variety:

"Should there be any imperfection [in] this barrel of apples, return this car[d] John Dickson, Ashville, N. Y."

"This barrel contains No. 1 To[mpkins] Sweets, prime season, December, Janu[ary] and February. Excellent for baking. [Re]quire long cooking in moderate h[eat]. Store in temperature near but not be[low] 32 degrees."

"This package contains No. 1 Ben D[avis] apples. Season, March, April, May, [to] June. Cooking apple. As a pie filler [the] pieces do not break down. Much used [for] apple dumplings.. Store in tempera[ture] near but not below 32 degrees."

The name of the grower should be print[ed] below these lines, and possibly an invit[a]tion for direct orders by mail from the co[n]sumer and as many of his friends as ma[y] desire fruit later or next season. The ear[ly] shipments, where there is a large cro[p] should contain cards stating that a supp[ly] of fruit is on hand which will be prompt[ly] shipped to any whose orders are receive[d] stating a price good up to a certain date.



Every Bump a Collision!

Every Bump is a Little Collision in Itself

COMBINE the bumps your Ford is compelled to withstand in a year, or even six months, and you would have a collision that would tear it to pieces.

Just because you can't notice the injury day by day is no sign it is not taking place.

Prevent the effects of the bumps from reaching the vital parts of your Ford Car or Ford One-Ton Truck and you will find a saving of more than one-third in the up-keep and tire expense. You also will find that at least fifty per cent has been added to its life and resale value.

Hassler Shock Absorbers afford this protection for every Ford. They absorb the "little collisions" before they get a chance to do their damage.

Hasslers are proving their worth on more than a million Ford Cars today. Look and you will see that one in every three Fords is now equipped with the Patented Hassler Shock Absorber. And while the saving is remarkable, yet a large percentage of Hassler owners purchased them because of their easy riding qualities. Any Hassler owner will tell you that the additional comfort alone is worth more than the cost of Hasslers.

We might also mention that gasoline mileage is increased; that steering is made easier, adding to the safety of the car; and that greater speed is made possible, giving more practical value to the car.

Hassler Shock Absorbers can be applied in a few minutes. They do not require marring of the Ford. There are two types: one for the Ford Passenger Car and another for the Ford One-Ton Truck.

10-DAY TRIAL OFFER

Find out for yourself what Hasslers mean. We do not ask you to risk your money. The Hassler dealer in your vicinity will put them on—let you use them for ten days—and if you are not pleased they will be taken off and your money refunded in full. Write for descriptive folder—name of the nearest dealer and trial order blank.

The Hassler Guarantee: "Absolute Satisfaction or Your Money Back"

ROBERT H. HASSLER, Inc. 1354 Naomi St., Indianapolis, Ind.

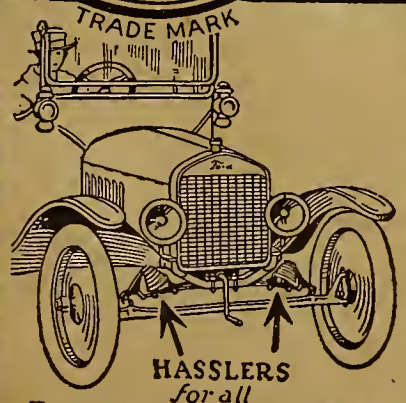
Canadian Factory, Hamilton, Ontario

A Standardized Quality Product—Worth the Price



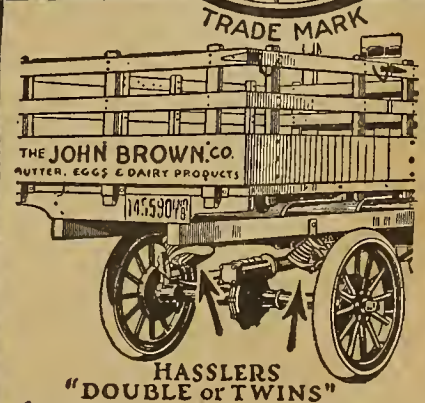


TRADE MARK



HASSLERS *for all* Ford Passenger Cars

TRADE MARK



HASSLERS "DOUBLE or TWINS" *for the* Ford One Ton Truck

HASSLER

TRADE MARK REGISTERED

Shock Absorbers

PATENTED

THE conical springs set at the angle shown prevent sidesway and allow for the most resilient downward action. The springs compress on either upward or downward movements—do not stretch out of shape—do not allow up-throw. Hasslers last as long as the Ford and make it last.



This Label Is a Guarantee of Quality

There is no Economy in Cheap Roofing

When you buy ready-roofing remember that the first cost of low-priced roofing is not the only cost. There will be also the cost of up-keep and the cost of an entirely new roof at the end of a few years. Don't give experience the opportunity to teach you that there is no economy in the purchase of cheap roofing for industrial plants, residences, or other buildings of a permanent character.

You exercise true economy when you buy

RU-BER-OID ROOFING

Ru-ber-oid is made and sold to meet a standard of quality, not a standard of price. As a result many Ru-ber-oid roofs have lasted 26 years and the limit of their endurance is yet to be found. The cost of up-keep is negligible.

One large user of Ru-ber-oid said recently, "You can put on a Ru-ber-oid roof and forget it." Certainly, if any roof can be safely forgotten, it is *one covered with Ru-ber-oid.*

If you are interested in the matter of roofing send for a copy of "Roofing Facts Worth Knowing." You will find this booklet worth reading.

Send for a copy of this book. It will tell you many interesting things about roofing.

THE STANDARD PAINT COMPANY
WOOLWORTH BLDG., N. Y.
Chicago New York Boston

There is but One Ru-ber-oid
The Standard Paint Company Makes It

Ro-San Indoor Closet

For Homes, Schools, Factories, Churches, Stores, Offices

Comfort, convenience, health. Sewage tank, installed beneath the bowl and under floor, holds 127 gallons. One charge of chemical lasts six months, kills germs and destroys odor. One pull of the agitator daily is only attention required. Tank drains simply and easily, contents seeping away from building. A turn of a valve empties tank.

NO ODOR—ABSOLUTELY GUARANTEED

Each Ro-San Outfit guaranteed absolutely odorless. Endorsed by health officials and health boards everywhere. We furnish single and multiple installations. Each outfit complete—no extras to buy. Always sold on 30 days' trial—ask for catalog.

Rowe Sanitary Mfg. Co., 968 6th St., Detroit, Mich.
Manufacturers of Ro-San Rolling Bath Tubs and Washstands—No Plumbing Required.



Devices Other Farmers Have Found Useful That Might Help You

NOTE: If you have a home-made appliance such as these, that helps you on your farm, send a diagram and description of it to us. We will pay you for all that are used. THE EDITOR.

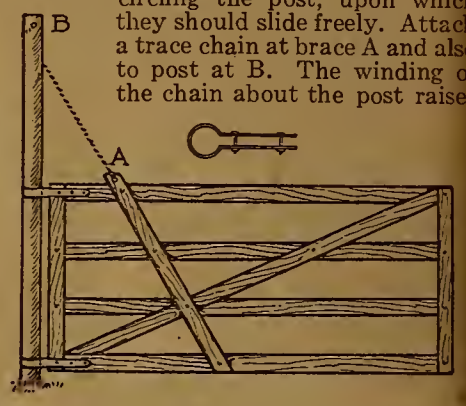
A Home-Made Filter

A SATISFACTORY water filter can be arranged by using a barrel and a keg as suggested in the diagram. With an ordinary 50-gallon barrel, the layers of filtering material being of the thickness shown, the free space (S) at the top will hold about 8 gallons of water. In using the arrangement the filter barrel is filled with water, and a faucet (A) is opened, permitting the liquid to seep through into the water keg. When the water keg is filled, faucet A can be closed and the filter barrel again charged. When the filter works slowly it indicates the sand is becoming clogged. This condition can be corrected by removing some of the top layer of the sand, possibly to the depth of six inches, and replacing it with clean sand. All of the sand and gravel in the barrel should be thrown away and renewed at regular intervals. *F. A. Sweet, Virginia.*



A Self-Closing Gate

THE gate here shown will always close itself unless propped open. Any common farm gate can be made self-closing with these hinges and the chain. The hinges, which are made from old buggy or wagon tires, are essentially large rings encircling the post, upon which they should slide freely. Attach a trace chain at brace A and also to post at B. The winding of the chain about the post raises

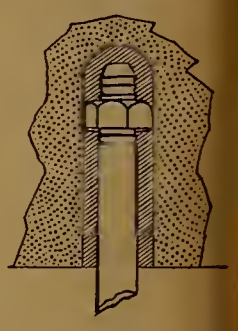


the gate as it is opened, and it closes by its own weight. The purpose of the brace to which the chain is fastened is to distribute the weight equally on all the slats. Any form of latch desired may be used. Such a gate will never drag when opening, even with considerable snow on the ground.

H. F. Grinstead, Missouri.

Fastening Bolts in Concrete Floors

IT IS easy to fasten machinery to concrete floors if this plan is used: With a cold chisel make a hole in the concrete the right size to receive the nut of the bolt to be used. Put the bolt with nut in place into the hole, as shown, and fill the space with melted babbitt. Wrap the parts of the bolt exposed to the babbitt with thin oiled paper, and when the babbitt has hardened remove the bolt. When the machinery is removed the holes can be corked, leaving no projections on the floor, and when replaced it is easy to bolt it solidly to the floor again.



F. H. Sweet, Virginia.

How to Make a Pit for Saving Potatoes

THROUGH many years of experience I have learned that the safest method of keeping potatoes, apples, beets, etc., is by burying them in a pit, well covered with earth. And it *never* fails. I have never known potatoes to freeze or heat when put away by this method.

Many lost their vegetables and fruit last winter, even though it was extraordinarily mild, while winter before last, being very severe, nearly all our neighbors lost their potatoes by keeping them in cellars, warm houses, etc. Many of them used what is known as the tump method, and found, when too late, that their potatoes had heated by being buried too deep, or had been frozen on account of too shallow a covering, or else something else had gone wrong—for most of the tubers were a rotten mass. And at the same time my own and a few neighbors' who had followed my plan had not a single potato or other vegetable or fruit injured in the least.

My method was brought from Ireland by my father. There, where potatoes are a main crop, the pit method is always used. It never fails to save them, plump and sound, and we always have seed potatoes to sell to our neighbors who do not take the trouble we do to protect them. The pit can, of course, be made to hold any amount. The one I made last fall held over 20 bushels of potatoes, a lot of various kinds of bulbs, and some other tubers. It is made according to the following directions:

Make a frame of heavy 8-inch plank, 10 feet long by 6 feet wide. Nail the corners tight, and put a strip 2 inches wide an inch from the top on the outside of the frame, so the roof boards will rest on it. Set a stout fence post 2 feet deep at each end, and 3 feet above the ground. Nail a strong scantling on top of the posts to support the roof. The roof boards are of 2-inch stuff, a double course, and cut 4 feet long. The gable ends are made separate and nailed fast to the post, making sure no cracks are left. The ends and one side and a foot at each end are nailed fast. The other side is left open to receive the potatoes, etc. Of course, you can make it as large as you wish, and can make departments in it for various tubers, fruit, etc.

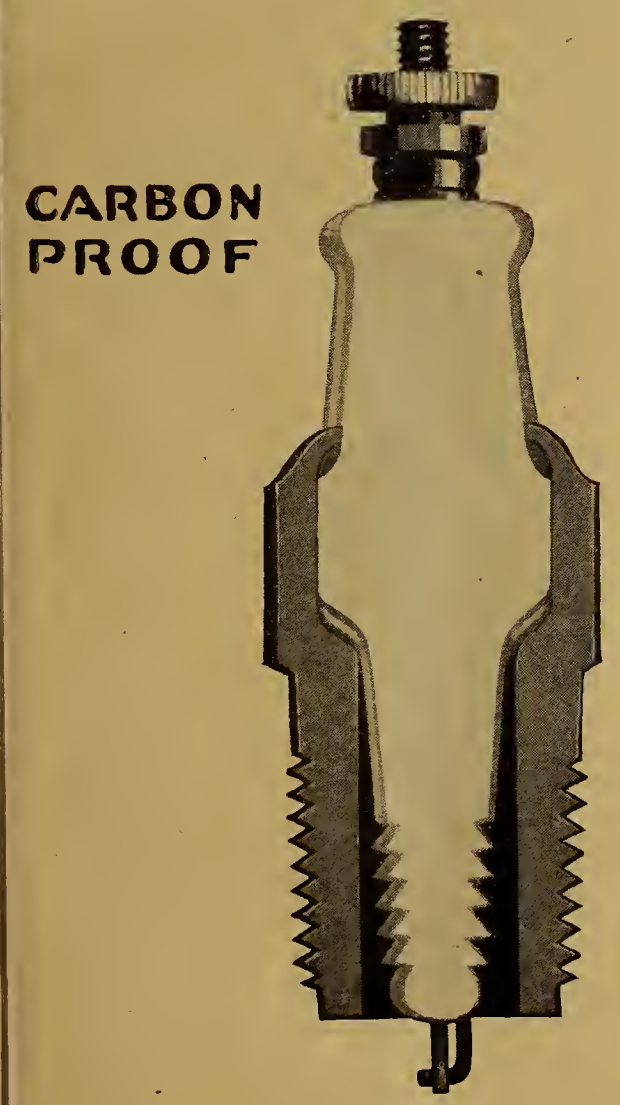
As it is filled up, put a good layer of straw between the potatoes and roof. Place the other boards on, and don't forget to insert a piece of pipe for ventilation. A tin ridge roll is added on top. Mark a line two feet from the lower edge of the pit, and dig a trench outside the line, throwing the dirt upon the pit until the whole is buried under at least a foot of earth. Watch after rains and freezing that the earth is not cracked nor slipped down off the top or ends, as it sometimes does. Occasionally throw on more dirt if needed. Close the ventilator during severe freezing.

In the spring draw down the dirt and leave the roof dry in summer. Wife has ours covered with vines and flowers, so that it is a thing of beauty in summer, instead of an eyesore. This little contrivance has saved more time, trouble, and labor than any other one thing on my farm, and our fruit and vegetables keep perfectly through the entire winter.

A. J. Cavanaugh, Kansas.

The Standard Spark Plug of America

It Defies Carbon



Note the sharp, knife-edged porcelain in the cross section of the AC Carbon Proof Spark Plug shown above. Those sharp edges are the secret of this plug's success. When the motor is running, the thin blades attain terrific heat which burns off the carbon as fast as it forms.

Thousands of Ford, Overland, Studebaker and tractor owners everywhere have learned the tremendous advantage in using AC Carbon Proof Spark Plugs.

If you own one of these cars or a tractor, you too, can put an end to spark plug troubles, economize on gasoline and increase the efficiency of your motor by installing a set of these plugs.

You will note the improvement immediately. You will find that these plugs permit a full spark advance without the engine knocking. That gives higher engine speed with a smaller throttle opening. Thus you save gasoline.

AC Carbon Proof Spark Plugs are especially designed for tractors, Studebaker, Overland and Ford cars.

But, remember, no matter what car you drive there is an AC Spark Plug specially designed for it.

Most makers of fine cars have for years standardized upon AC Spark Plugs for factory equipment.

Still further evidence of AC superiority is the fact that AC Plugs were selected by the United States Government as standard equipment for Liberty and Hispano-Suiza airplane motors during the war.

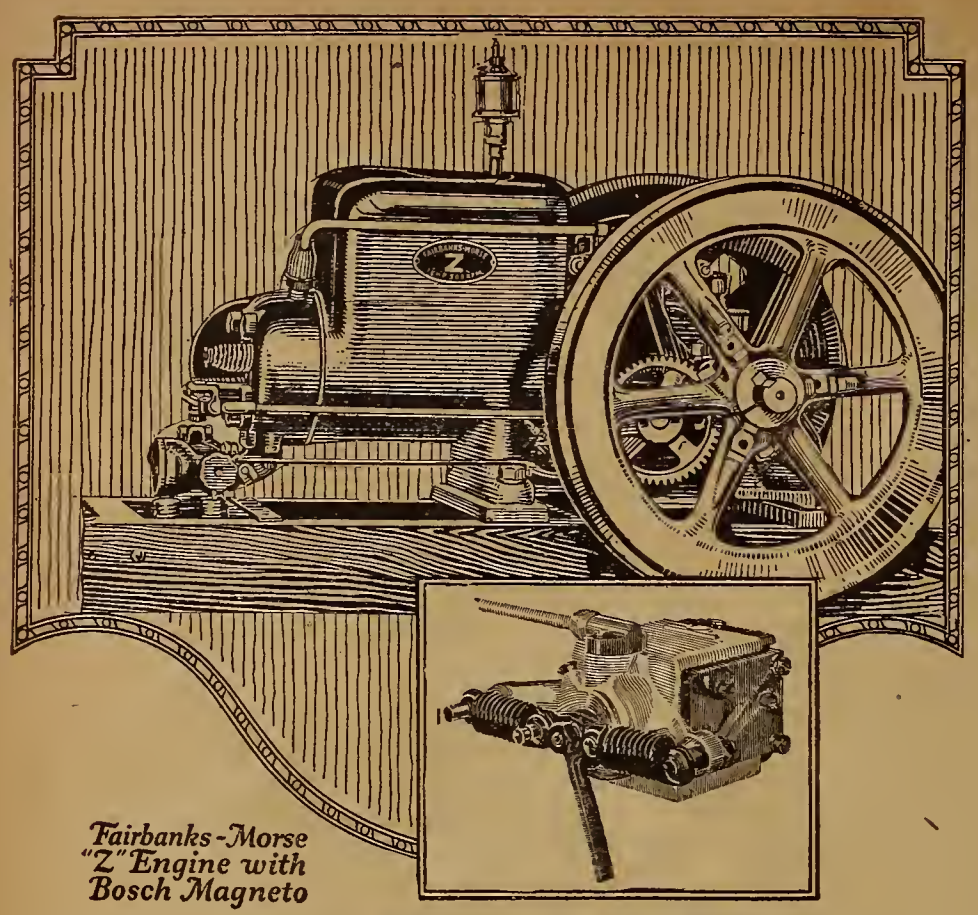
The letters, AC are glazed in the porcelain of the genuine. Be sure these letters are on the spark plugs you buy.

Champion Ignition Company
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These manufacturers use AC Spark Plugs for factory equipment

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J. I. Case T. M. Co.	Gabriel Trucks	Laliey-Light	Oakland	Saxon	Ward La France Trucks
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Chandler	G. B. S. Motors	Liberty	Oldsmobile	Scripps Motors	White
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Cole	Hall Trucks	Marmon	Pan-American	Signal Trucks	Wisconsin Motors
Commonwealth	Harvey Trucks	Master Trucks	Paterson	Singer	Wolverine Tractor
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Continental Motors	Haynes	Maytag	Peerless	Standard "8"	
Crane-Simplex	Herschell-Spillman		Phianna	Standard Trucks	

U. S. Pat. No. 1,135,727, April 13, 1915, U. S. Pat. No. 1,216,139, Feb. 13, 1917, Other Patents Pending.



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WESTERN CANADA Farm Lands at Low Prices The Wheat Belt of America

If You are Going to Remodel

[CONTINUED FROM PAGE 11]

installed the first year. The small addition necessary for the office extension can easily be made the second.

In developing his house he should keep a definite plan constantly in mind. He should know what the finished homestead is going to look like, and stick as close as possible to the original design. And in creating the design for the house he should also make a strict division between what belongs to the farm and what to the home. The farm lands are under his supervision; the house lands should be under the wife's. That flower garden is hers, and so is the house vegetable garden and the drying yard. She should be mistress of all she surveys in that house. Too many farmers conduct their homes as a sort of necessary evil to farming, an adjunct that has to be put up with. Give the woman a chance—and see what she'll do with it.

Figuring an exact cost on these various improvements is extremely difficult because of the unsettled condition of labor and the high prices. The figures given here are on the basis of current New York prices—the highest in the country. From them you can get an approximate idea of what the improvements in your section would be, by using this table:

Philadelphia and suburbs	10-15% less
Northern New England	20% "
Southern New England	19% "
Middle South (Kentucky and Maryland)	30% "
Chicago and vicinity	11% "
Middle West (Ohio, Michigan, and Iowa)	47% "
Pacific Coast and Northwest	18-50% "
Colorado and vicinity	18% "
Southwest (Arizona and New Mexico)	30-35% "

Each of these localities is affected to a greater or less degree by the cost of labor and transportation. In many instances much of the work can be done by the farmer himself. Again, the materials may be near at hand. All of these variations change the sum total of ultimate costs.

Setting them down in detail, we have, for the separator wing, which is 24 feet long by 14 feet wide:

Foundations—	
Concrete footings—Cement, 6 barrels	$18
Forms—⅞-in. boards and studs	24
Floors—	
Concrete floor in separator-room and laundry—Cement, 2 barrels	6
Exterior Walls—	
Studs, 3M	18
Sheathing, 1M, 3-in	55
Paper	3
Beveled siding, 9M	60
Roof—	
Framing—Rafters, 5M	30
Shingle lath and shingles	40
Millwork—	
4 windows at $7	28
4 doors at $6	24
Porch flooring	4
	$310

The office extension, which is 10 x 11 feet and has a sleeping porch above, figures out at:

Foundations—	
Concrete footing—Cement, 3 barrels	$ 9
Forms—Boards and studs	12
Exterior Walls—	
Studs	5
Sheathing, 5M	27
Siding, 5M	30
Paper	2
Flooring—	
First and second floor framing, 3M	18
First and second floor boards	13
Roof—	
4 posts for roof	8
Roof framing, 2M	10
Shingles and lath	9
Duck roof	32
	$175

The miscellaneous expenses to consider are:

Painting—Ready-mixed paints for all jobs	$35
Window sash—17 new window sash at $5 a window	85
French doors—3 French doors at $20 each	60
Dutch door and hardware	25
Shutters—17 pairs of shutters at $4 a pr.	68
Extra balusters, newels, etc., for stair change	15
Concrete steps to cellar	8
Lumber	5
Closets—	
Lumber, 3M	20
Lath and plaster, 40 sq. yds. (materials only)	10
	$331

As the reader can readily see, each of these items is capable of generous reductions. The gardens, fences, and pergola can be developed without such an expense, the excavating can be cut in half, and the chimney work may be reduced perceptibly, as it merely requires an extra layer of brick at the chimney bases and a general pointing at the tops. Again, as I have suggested, this work can be extended over a period of years and advantage taken of reductions that may come.

The heating plant should provide a furnace capable of burning both wood and coal. In extremely cold weather the living-room heat can be cut off and the dining-room-kitchen used for living purposes. The price of a hot-water plant to heat the entire house will cost approximately $750, including installation.

The choice of lighting plants lies between electricity and acetylene gas. Both have their respective merits, dependent on local conditions. The one advantage of the electrical system in this instance is that it can be housed at the base of the water tower by the barn, the same room being occupied also by the electric pump which gives water supply from a pneumatic tank. An electric-light system for this house, providing 20 outlets, costs approximately $400, and the necessary wiring $125, or a total of $525.

The plumbing system is a simple, one-stack plan to serve the bathroom, kitchen, laundry, separator-room, and down-toilet. These fixtures and their install will cost approximately $700.

We therefore have a total for material necessary for these improven labor not being figured:

Separator wing	
Office wing	
Miscellaneous wing	
Heating	
Lighting	
Plumbing	
	$

There is just one more word to sa costs: Paint will reduce the costs of up It is one of the best insurances ag time and storm and wear and tear you can carry. Keep the house painted.

Don't be afraid of spending money on your home. The best investment you command is your house—an investment paying big interest to yourself and your children.

Tricks and Tackle I Use

[CONTINUED FROM PAGE 9]

glisten in the grass that tells of one out for a promenade. As they run like so many deer, one must step lightly, and pounce with thumb and fore-finger ahead of the brute to collar him. Crawfish and helgrammites you will find sequestered under rocks in the brook. If lifted slowly, so as not to stir up sediment, you will perceive him waiting a moment to collect his wits, and then is the time to apprehend him.

Provided with all these delicacies and a pail of live minnows to boot, you row over to a good cove, with rock ledges down in the green depths, anchor both ends of the craft, and cast out your frog to drop into the darkest spot in sight. Two rods can easily be tended by one man, and the reels are to be left absolutely loose and free, and everyone keep quiet.

Presently a line will begin to move out, stealthily. You have heart failure, apoplexy, nerves, pounding gizzard, and a lump in your throat—but you will not touch that line! Wait! Twenty, thirty, forty feet, he takes out the line, as you stealthily get possession of your rod. Next he spits out the bait and turns it, preparatory to swallowing it whole. A jiggle coming up the line apprises you that the swallow has become an accomplished fact, and *then* you strike, and pandemonium breaks loose by the yellful as he showers out of water!

Such is the broad outline of bass fishing.

The Call of Home

By Samuel A. Derieux

OLD FRANK, Irish setter, all unconscious of impending good or ill, crawled out of his clean warm kennel underneath the back porch, stretched his long, powerful muscles till they cracked, yawned mightily at the misty winter sun risen over the Virginia mountains, then, tail wagging, trotted around the big white house of his master.

The front steps he took three at a bound. He scratched at the wide, hospitable doors, then waited, ears pricked, tail still wagging. Steve Earle, his master, answered this regular winter morning summons (he always did answer it), asked him how he was feeling, led him down the spacious old hall, opened the living-room door for him. And now, for the first time, old Frank knew—knew he was going on a journey.

For his collar and chain lay on the table, and Lancaster, his master's friend, who lived in New York, who had come all unexpectedly yesterday afternoon and driven out from the station at dusk—Lancaster stood, tall and ruddy, before the fire, his overcoat on, his satchel at his feet.

But more than this old Frank knew, for he was wise with the wisdom of the seasoned bird dog. Steve Earle's overcoat hung on the hat rack out in the hall; his gun stood in its corner with the hunting coat draped over it. Steve Earle was *not* going.

It was this that made old Frank drop his long silken ears and look with pleading eyes first at Marian Earle, his mistress, then at Tommy Earle, the little boy, then at Steve Earle, the master.



The two men climbed down out of the wagon and came stealthily across the field. The burly man held in his hand a rope

"He doesn't seem to be very keen about leaving home," said Lancaster, smiling down at him.

"Oh, he'll be all right," Steve assured. "He's a good sport, old Frank. Just had a sort of exiled feeling for a minute. You see, he's a countryman like the rest of us, and don't like to leave home. I'm glad for him to go—to see something of the world."

So spoke Steve Earle, the master. But out in the spacious kitchen, hung with pots and pans, where his mistress and Tommy put his pot of breakfast before him and watched while he ate—out in the kitchen old Aunt Cindy, the cook, raised her voice in protest.

"Ain't dey got no dogs up in New York whar dat man come from?" she demanded. "Why don't he have a dog of his own den? He rich enough to buy a dozen. What he want to stop over here an borry *our* dog for? Whar he gwine to take him to, Miss Marian? Fluridy, you say? Lordy, lordy, dat a long way to take our dog, a powerful long way!"

"But he's goin' to bring him back, though!" cried Tommy.

"Well, honey, I don't know about dat. You never can tell. Dis here's Friday, an' Friday a bad luck day. Sometimes folks, an' dogs too, set out on Friday an' never do come back. Lordy, lordy, ain't I seed things like dat happen?"

Marian laughed.

"Don't scare the child, Aunt Cindy."

"I ain't skeerin' the chile, Miss Marian. I mean ev'y word I say, Miss. Friday a bad day to start anywhere—a powerful bad day!"

And she went on wiping dishes and shaking her turbaned head.

It was winter when Steve Earle and Lancaster lifted him into the baggage car at the station near home. It was summer in the strange flat country where, after two days and two nights, Lancaster took him off the train. It was old Frank's stanchness that brought calamity upon him. They had had three great days' shooting; he had enjoyed every minute of them, for old Frank was a good sport, and at the lodge in the pines down here were other hunters and other dogs, and Lancaster was a fine shot.

It was on the morning of the third day that he set a covey close up, in a little clearing in the pines. He stopped short, just in time. If he stirred, those nervous birds—he heard a little twitter even now—would flush. He would not move—Old Frank the Stanch, they called him—until Lancaster came up behind him for the shot, and ordered him on, and Lancaster was far behind, on the other side of the pines.

A fine sight he made in that lonely country, standing head erect, tail straight out, sun flashing on his silken red hair. So those two disreputable men, driving in a dilapidated wagon along a sandy road in the edge of the pines, must have thought. For the driver, a burly, sallow fellow, pointed him out, pulled on the reins, and the wagon stopped. The two talked for a while in guarded tones, next they stood up on the wagon seat, and looked all around, then they climbed out *and came stealthily across the field.* The burly man held in his hand a rope.

Instinct alarmed the dog, warned him to turn. Professional pride held him rigid, lest he flush those birds and be disgraced. Pride betrayed him. A sudden grip cut his hind legs from under him, threw him flat on his back just as the birds rose with a roar. A thumb and forefinger, clamped in his mouth, pressed on his nose like a vise. He was squirming powerfully in the sand, but a knee was on his belly, another knee was on his throat, and the sky was growing black.

Writhing and twisting, he was lifted to the wagon and tied in the bottom with ropes. Then pine trees were passing swiftly overhead. One man was lashing the mule. The other was standing up, looking back.

"See anybody?"

"No."

"Reckon he's one of them thousand-dollar dogs, Jim?"

"Reckon so! Look at him!"

All day the wagon wheels ground the sand. All day old Frank, tied in the bottom of the wagon, sullenly watched those two men in the seat. Once or twice, at the sound of other wheels approaching along the unfrequented road, they pulled aside into the woods and waited. At dusk they turned into a dirty yard. On the porch of an unpainted shack stood a woman; beyond stretched level fields of broom straw, then the flat blue line of forest, and above the forest a dark red glow.

They unfastened all the ropes but the one about his neck, pulled him out of the wagon, dragged him off to the log corn-crib, shoved him in, untied the rope, and bolted the door. Then the burly man shoved in a pone of cornbread and a pan of water.

"You go to town to-morrow, Sam," he said as he rebolted the door. "Just hang around and listen. See if there's any reward in the paper—big red Irish setter. His owner might telegraph the paper to-night. Sooner we make the deal, the better."

Inside the crib the captive stood listening with shrewdly pricked ears while the mumble of voices died away toward the shack, steps stamped up on the porch, and the door slammed. Then he went cautiously round his prison, whiffing the sides, rearing up on the log walls. Across the rear corner was a pile of boxes. He climbed up on them. They rattled, and he jumped quickly down.

But later, after all sound had ceased in the shack, and the lights he had been watching through a chink in the logs had gone out, he climbed carefully over behind these boxes. There was space to stand in back here; the floor was of broad boards. Through the cracks he could see that the crib was set up off the ground.

He began to scratch the corner board, then to gnaw. All night long at intervals he sounded like a big rat in a barn. Sometimes he rested, panting hard, then went back to work.

At the first sound of movement in the shack next morning he leaped back over the boxes, and when the burly man opened the door to shove in bread and water he lay in the middle of the floor, and looked upon his captor with sullen dignity.

That night he gnawed, and the next. But the surface of the board offered little hold for claws or teeth. Industry, patience, a good cause, do not make boards less hard, nails less maddening. He saw the third day dawn, he heard steps stumping about in the shack, he saw the other man ride into the dirty yard; and he sank down panting on his prison floor, his head between his paws, dismay in his heart.

They brought him his breakfast, and there was talk before his prison.

"Two hundred dollars, hell!" said the burly man. "Is that all they're offering? They'll give a thousand but what they'll git that dog?"

"Well," said the other, "I told Fred to watch the papers, and if the reward went up to send us one. You goin' to keep him stopped up in thar?"

"No. I'm goin' to hunt him—over 'bout the swamps where nobody's apt to see him. Then s'pose questions is asked? We don't read no papers. We just found a lost dog and took care of him—see?"

"S'pose he sneaks off on a hunt?"

"Don't let him. If he tries to git out of sight, fill him full of shot."

"The whole thing's risky, Jim."

"Well, what is it ain't risky?"

Old Frank had always associated with gentlemen, hunted with sportsmen. Now he was to find what it means to be threatened, browbeaten, harassed in his work by inferiors.

On the first hunt, as soon as he got out in the field, he was yelled at. He turned in bewilderment. The men hunted on mules, their guns across the pommels of their saddles, and now they were gesticulating angrily for him to come in. He ran t
looking up ir
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man.

After that h
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smelling birds. But the burly man
him in, got down off his mule, cut
stick, and threatened him. Agai
enraged yell full of danger made hin
to find both guns pointed straight a
and the face of the burly man cri
He came in, tail tucked, ears thrown back, eyes wild.

"You look here, Jim," said the man called Sam, "you better be satisfied. They're offering four hundred dollars now, and that looks good to me. It's been more'n a week. They ain't goin' to raise it any higher."

"They'll give a thousand!" yelled the burly man.

"All right, Jim—I've warned you!"

Day after day they hunted over the same ground, along the border of a great swamp, where there were no houses, no roads, no cultivated fields. Day after day they grew watchful, until he was almost afraid to get out of the shadows cast by the mule. His tail that he had always carried so proudly began to droop, the gallop that used to carry him swiftly over fields and hills and woodland gave way to a spiritless trot. Fields and woods stretched all about him, the sky was overhead; but he was tied to these ragged men on mules as if by an invisible rope, which to break meant death.

At intervals during the silent nights he still gnawed at his board behind the boxes, but he could not hunt all day and stay awake at night. Sheer weariness of body and spirit made him welcome any rest, even that of his hard prison floor. And there were times when it seemed that he had never known any life but the one he was living now.

But sometimes after a hunt, as he lay on the few shucks he had scratched together into a meager bed, there came to him from the shack the smell [CONTINUED ON PAGE 34]

FOXY GRANDMAS



Photo by Western Newspaper Union

NOTE, please, that this introductory grandma was sprightly enough to climb the platform, while the general was content to stay on the ground. She happens to be Mrs. J. B. Gordon, widow of the famous Confederate soldier of that name, and she is telling General Burnham that if we go to war again within the next forty or fifty years, and he doesn't feel equal to it, she'll lead his troops for him.



NO COMMON grandmother this. She is *great*-grandmother Taney of Tampa, Florida, if you please. And foxier than the foxiest. So if you don't like some thing that someone named Taney does, blame her. She started them in this country. And came all the way from Ireland to do it, too. She bats a very high average on great-grandchildren—something like 390 in the Grandmas' League, I think. "And never a crooked back nor a vacant eye in the whole lot," says she.





GRANDMA CATHERINE ADAMS of Michigan City, Indiana, ladies and gentlemen. Bow, bow to her, all of you! She deserves homage. She adores pink. And she told us as much—on pink stationery. But her daughter said no—she was too old for pink. And not a smidgin of pink did she get in her dresses. Heliotrope was the dope. So grandma grew her a bed of pink sweet peas—and sat among them. And made money selling them! Some grandma!

IF YOUR husband is hungry for a divorce, shut up the place and send him to a boarding house. That's what Mrs. John Foxhall Marsh of Washington, D. C., did to her daughter-in-law's husband—at the same time taking daughter-in-law home to an abundance of square meals. In due course husband was offered one of them, with his wife attached. He promptly—not to say in haste and confusion—took both. Foxy? Well, rather!



Photo from Hollands Studio

JOSEPHINE CLIFFORD McCRACKIN'S only claim to grandmothership is the fact that she recently adopted Mary Pickford as her granddaughter. But, gee, that's enough! Besides, she's America's oldest woman reporter, on the Santa Cruz, California, "Sentinel." In 1900 she fought the would-be destroyer of California's redwood forests to a standstill with her pen—and won. So look out! If you do anything wrong in her neighborhood she'll tell the world about you.

Photo by Press Illustrating Service



JULIA REINHARDT finished with husbands—two of them—early in life, and has been earning her own living for the last fifty years. She likes this picture showing how she did a little war work. She swims, skates, rides, dances, and loves to hike in long parades. She picked out the highest apartment house in New York, and hired the top floor so she could walk up and down stairs. And you have her word for it, she doesn't squeak in a single joint, though seventy-three.



Copyright, Underwood & Underwood

THIS picture proves that foxy grandmas, like street cars and bills and misfortunes, sometimes come in bunches. Here we have Grandmas London, 76, of Hungary; Schentz, 78, of Galicia; Comisiere, 76, of Russia; Winter, 74, of Germany, and Berkowitz, 75, of Rumania, proving that Europeans could live peacefully among themselves if they only had an American flag to hold them together.

CHAMPIONS



HELEN RYAN, of Cedar, Minnesota, is only the *sister* of a champion. He led the state pig clubbers for two years. But Helen is getting there. She will have a champion pig yet. If Jezabel, whom you see in the picture with her, doesn't make it, another ham queen will. Helen believes in the personal touch. She takes her pig for long walks with her over the hills. She says the pigs enjoy it, and that it makes their legs very strong. But, Helen, does it put on fat?



THERE'S money in the championship business, too. Here Herbert Lowe of Faribault, state champ of Minnesota, won $80 in prizes, a national club medal he could melt up if he wanted to, and two trips to the state capital. Of course, some will say that his naming her Mary Pickford had something to do with it. But it didn't. He took good care of her—oiled her with cream separator oil and fed her whenever she came to the house and squealed, which she frequently did. *That's* what did it.



WINNER of the Duroc-Jersey class, Boys' and Girls' Pig Club Contest, Illinois State Fair, 1918, sweepstakes champion of contest and second in State Pig Club championship. That's an awful long title for such a short boy, but it all belongs to him, and he bears it lightly. Ralph Gibbs, he is, of Palmyra, Illinois, who, as you see, carries a fence with him wherever he goes, and a stick to make his pig stay behind it.



Photo from Walter C. Harris

THIS young man is not strictly a pig club champion, although he does belong to a pig club in Preble County, Ohio, and his record is high. But we leave it to you if he isn't a champion *boy?* Gosh, if there were boy clubs among boys, and this boy were entered—well, we'll lay our last Liberty Bond on him for the International sweepstakes, at least. As for the pig, shame on it for going to sleep in company!



Photo from G. A. Tibbans

MISTRESS KATIE YOUNG of wood, Missouri, cou be happy with championship. S won three—as a sp Such jawbreaker "latitudinarian ist" are mere c play to her. You hit her with a who abridged dictionar she'd never feel it. ter she had slain a pupils in Missour attacked the school cipals, and recently quished the last of by spelling "insec correctly. She is the champion stra ry picker—110 bo day.



Photo from S. R. Winters

HERE'S Elton Sartor, 15, of Bartlett, Texas, 1918 Pig Club Champion of the entire United States. He realized a net profit of $1,052.85 on a borrowed $25 in fifteen months. Elton, we hail you! Long may you wave! And you say that whole milk will certainly make the pig's tail curl? Well, we knew it did curl, but we never knew before what did it. Now, if you were talking about our wife's hair; we could tell you. But that's different.

HERE we have another national champion—Ted Scott of Bagley, Wisconsin, with his junior champion Hereford steer, which won its laurels at the 1917 Baby Beef Show. Thank goodness, there's nothing uppety about Ted! Champion though he is, he presents himself in the same duds in which he did the work that made him champion. Sure, didn't Benjamin Franklin appear at the court of kings in a rusty black suit? And wasn't he greater than them all? We should say so. He talked them out of their pet ideas on money, anyhow. And that's going *some.*



Photo from W. A. Frechoff

Gates and Gateways Your Boy Can Build

By P. W. Humphreys

IF YOUR boys delight in swinging on the home and garden gates, in spite of frequent protests, and if you will point out to them the trouble caused by this forbidden pleasure, it is likely that as their genius for "building things" begins to find expression they will take an interest in building gates and gate posts that will be plumb and straight and true after hard usage. I will try to tell you how you can help them do this.

There is no reason why the gates for fields and driveways, as well as those of the home and garden entrance, should not be kept in good condition and made attractive. Why not hold your boy responsible for the appearance of your gates? In a short time the amateur builder will become ambitious to have the finest gates in the neighborhood.

Setting the posts to insure firmness and durability, and proper bracing to prevent sagging, will result in a pleasing, trim, and stately appearance to the plainest gate. There is very little in the building of gates and the setting of posts that will be difficult for the boys to master. By following practical suggestions in the handling of wood, stone, and concrete the boys may quickly develop skill.

The broad gates required for the entrance to the home driveway and to the fields may be difficult for the amateur, but a little practice on the narrow gateways to garden walks will lead to practical knowledge in bracing and treating larger and heavier gates. And attractive, well-built, well-kept gateways will alter the appearance of the entire place. They will make your place *worth* more.

The narrow gateway built in a picket fence of the front yard or lawn may be made simple and effective in form without difficult labor. When the pickets are pointed the gate posts may have a wooden cap and a bit of conical roofing that will give additional attraction at little cost of time or money, and will provide the old New England effect that will be most attractive.

Bark-covered cedar posts or good chestnut posts from the home woodlot will look very well and require little ornamental finish. When posts of this type are chosen it is important to have the gate of the same rustic finish. Harmony between the gateway and its surroundings is important.

All forms of wooden posts require practically the same treatment in setting. They must extend at least three feet underground to prevent frost-heaving and insure firmness. When the holes have been dug for the posts, dig out another inch or two to allow for foot stones. When it is possible, secure broad, flat field stones. They are best for placing beneath the posts. If these can't be had, small loose stones, well packed down, will do.

Various plans are followed for treating the ends of the posts to be buried underground to keep them from rotting. Some experts insist that the posts should have the lower ends charred. Others advocate a coat of tar, while still others insist upon first charring and then tarring. It is well not only to place the prepared posts on the bed of loose stones, or the flat foot stone, but also to fill in with stones about the post to preserve it from contact with the soil, while rendering it more secure.

The tarred ends of the posts set down three feet, on good firm ground, and on a foot stone well rammed down, will insure satisfactory results for the narrow gateway. When the weight of broad, heavy gates must swing from the posts it will be a wise and safe plan to brace the posts beneath the ground by firmly nailing cross cleats from eight to ten inches long on opposite sides of the post; one a foot from its base, and the other about a foot higher.

When it is possible to avoid it, do not set the big posts on a clay foundation. When a streak of clay is struck at post-hole depth it will be better to dig below it; or, if this goes too deep, take extra precaution preparing the well-packed foot sto Posts thus carefully placed will be stric out of danger from frost-heaving a sagging—the two worst enemies of ga way beauty.

Sagging gates are quite as distressing sagging posts; and they require entirely ferent treatm First be sure t all the wood us in building t gate is well se soned; then s that it is firmly p together, wheth it is of picket ty or rustic work. T rustic gateway pleasing through garden hedge, b never for buildi a gate in a pick fence.

In building wi gates for the dri or roadway e trance it is bett to have two ga closing in the ce ter instead of single one of ext length. These lar gates should ha some sort of re provided for the to take off the strai A bit of stonework set even with the dri or a flat field stone with a hole drilled in t center, will be satisfactory. Then a dr bolt, fastened to the gate stile, should so placed that it will drop into this hole the stone, and hold the gate firmly in pla while supporting it. For the double gat only one will require the drop bolt in t center of the drive, and the other gate w be held by its fastening to the secured ga The stone should be set flush with t drive to prevent any obstruction.

The gateway for the drive should be least 14 feet wide. Whether the wide sing gate or the two narrow ones are used, ta special care to have them well braced. T usual type of driveway gate is formed four or five horizontal rails or slats planed lumber supported by the strips two-by-threes or three-by-fours (accordi to the height and weight of the ga forming the uprights for hinges and f tening. For the wide gate a center upri is also used for taking the braces. But i a better plan to have the one long br extend from the top of the gate at the op ing end to the bottom at the hinged e

The end of each board forming horizontal slats should not only be firm mortised into the end posts of the gate the uprights, but also secured with bo

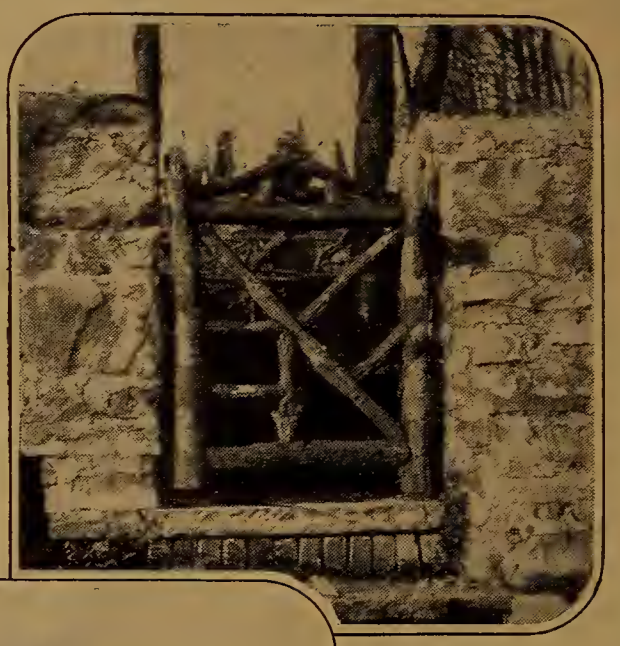
In placing all main supports that are be mortised, coat the tenon thickly w paint. The ornamental design should ha its parts painted before being put togeth



The roofing at the left will not be attractive until completely draped with hardy vines.

The gate at the right has strong, durable lines, suitable for its setting in the rough stone wall..

The quaint type of revolving gate below is decidedly ornamental for the rustic arbor entrance to the garden.





Some Simple Whys in Cookery

By Marion Brownfield

HEAT hardens the substance called albumin that is contained in such foods as eggs, milk, and meat. That is why eggs harden when exposed to high temperature, and why milk forms a scum when boiled; also it is why dishes in which these foods have been should not be plunged into a pan of hot dish water, for hot water cooks the remains of these foods on, and makes them very hard to wash off. Any dish having contained milk or egg should first be soaked, and even rinsed, in cold water, and then later scalded.

Heat has the opposite effect on sugar, as it dissolves it. Any dish having contained a sugary mixture should be cleansed with hot water from the very start.

Heat in combination with moisture has what might be called an explosive effect upon starch, for it causes the tiny cells that compose any starchy food to swell. That is why a tablespoonful of cornstarch, for example, will thicken a liquid pudding or a gravy, because with heat it expands in volume. Also that is why any starchy food, such as potatoes or rice, for instance, must be thoroughly exposed to a high temperature so that the cellulose structure of the starch may be thoroughly broken, and thus made digestible.

Some acids and alkalies combined with moisture form a gas that expands with heat. That is why baking powder, or the equivalent in soda and cream of tartar, expands and raises a cake or bread mixture when placed in the oven or other warm place. Moisture and heat immediately affect the acid and alkali which these leavening agents contain.

Egg is a lightening agent when beaten up and stirred into any recipe that is to be heated, for the air beaten into the egg expands with heat and helps raise the mixture. That is why pop-overs rise so satisfactorily when made with eggs.

Molasses contains considerable acid, although it is not commonly thought of as a sour ingredient on account of its sweet taste. That is why soda is used as a raising agent in molasses gingerbread. The soda, being an alkali, makes the proper combination with the acid molasses to make the equivalent, for example, of baking powder, or soda and cream of tartar.

When Setting the Table

By Jane Macpherson

IT IS not necessary to have trained servants to set the table correctly and to serve the meals nicely. Any housewife can do it, and with no more time and energy expended, if she will but train herself.

Setting the table correctly three times a day is an art, but it is one which everyone may acquire. Simplicity is the keynote in all table decorations. In no other point is the taste and culture of a housewife so observed as in the table service which she offers her family and friends.

The table should not appear crowded, and, as far as possible, china, glassware, and silverware should harmonize—that is, they should all adhere strictly to the note of simplicity.

The arrangement of the plate, glass, napkin, and silverware for each person is called the "cover." Each kind of meal has its own particular pieces of silverware necessary for it, but the same general rules apply to all.

In all cases the plates and silverware should be placed one-half inch from the edge of the table. The dinner knife and fork are always placed nearest the pla The knife, with the blade turned tow the plate on the right of the plate, t fork with tines up, to the left of the pla

The other pieces of silver are placed the order in which they will be us beginning with the outside. The spoo are placed to the right of the knife, wh all forks are placed to the left of t dinner fork. The butter spreader may placed either on the butter plate or at t top of the "cover," with the point towa the fork.

The glass has a correct place at the t and slightly to the right of the kni The napkins are laid at the left of the f with the loose edges parallel to the ed of the table and fork; or it is rolled a placed in the same position.

The butter plate is placed at the t and slightly to the left of the fork.

The table linen may vary for the diff ent meals, as a lunch cloth or doilies breakfast and luncheon, and a tablecl for dinner. These should bear out t same keynote of simplicity as the tab decoration.



The Comfort Car

THERE are several reasons why the Hupmobile is regarded as an especially staple value.

One, of course, is the car's uncommon quality.

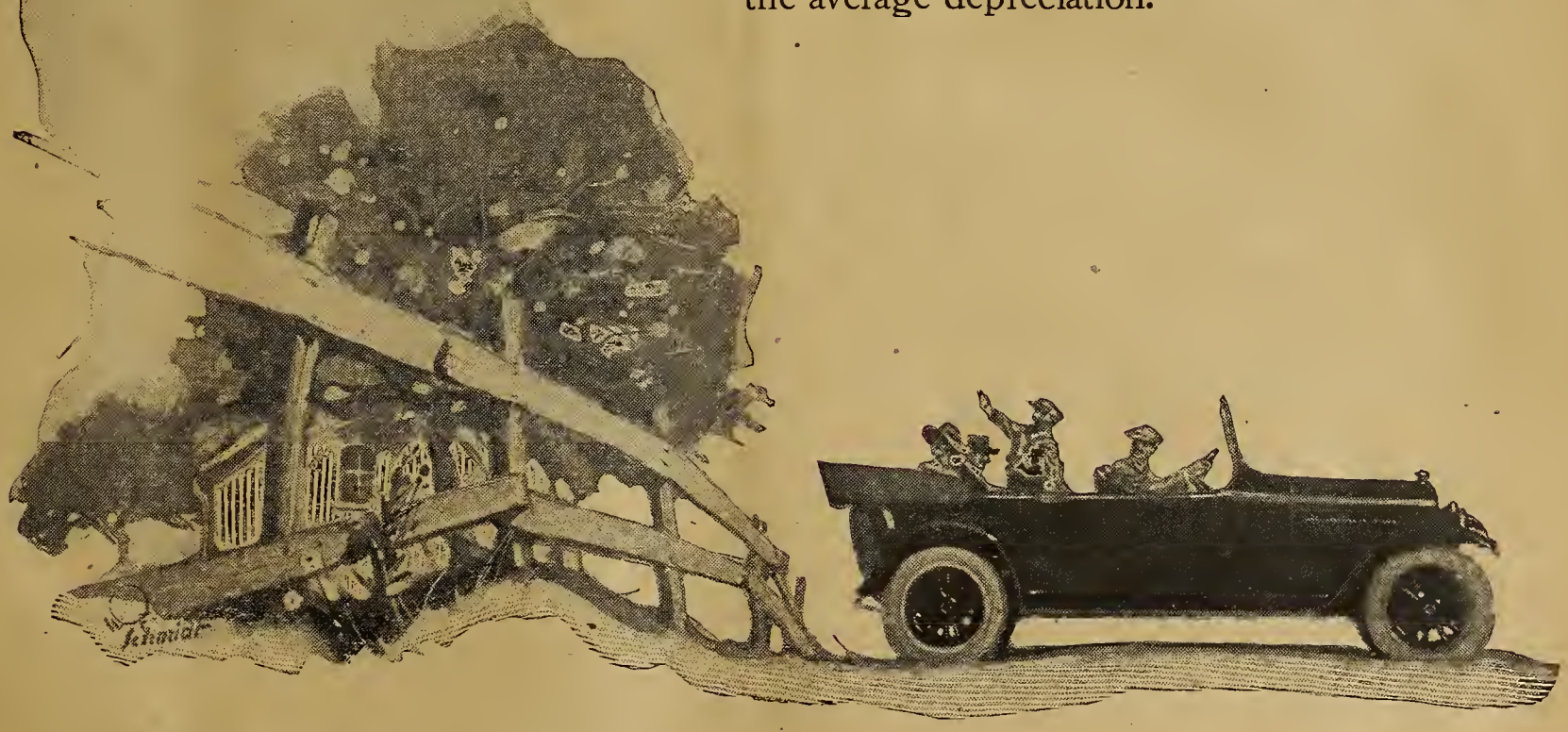
Another is that pronounced yearly changes are avoided.

Mechanical and general designs, as worked out in the beginning, have proved basically sound and right.

The result is that the Hupmobile is exceptionally long-lived; and that there is no need for radical engineering revision from year to year.

In addition, the Hupmobile always commands an unusually high second-sale price, in proportion to first cost.

Buyers, therefore, feel that their investment in *The Comfort Car* is subject to much less than the average depreciation.



Hupmobile

The Great Friend

A personal story of Theodore Roosevelt as he revealed himself to one of his associates in magazine work.

By SONYA LEVIEN

You will feel that you have passed through a rare experience after reading these inimitable bits of unpublished personal history of America's great American.

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THE AMERICAN MAGAZINE FARM AND FIRESIDE

COLLIER'S WEEKLY

I Grow Better Truck

[CONTINUED FROM PAGE 17]

stakes and traveling to an unknown country, probably with an insufficient capital, and—as results on the government irrigation projects have already shown—a very serious chance of being swamped before he could get on his feet.

To be efficient, any irrigation system must be, first of all, practicable; and then it must use the water to the best advantage. The overhead system does work. There is no mechanism to get out of order. It is just as simple as putting running water in the barn. Repairs and upkeep are negligible. Systems that were put in years ago are still in use, and are doing as good work as ever. The type of nozzle has been developed and changed until it is much better than it was at first, but the system, once in, will last as long as galvanized iron pipe will last.

And the water is used much more efficiently than by the "open furrow or the flooding" systems commonly used in the irrigation section in the West. Some parts of the field absorb more water than others, to say nothing of the labor cost of applying the water and grading the field. By the nozzle-line system the water is applied with a mechanical uniformity, in the form of a fine, gentle rain which neither affects the soil nor injures the foliage of delicate flowers. Furthermore, it is practically automatic in operation—one man being able to attend to several acres of irrigation and still have most of his time free for weeding or cultivation. There is an automatic turning device which makes it possible to wet down uniformly, to any desired degree, large areas by simply turning on the water.

What Does It Cost?

The third point, economy, depends upon the cost of installing and operating the system.

With present market conditions it is impossible to give any accurate estimate. The biggest cost of installing an overhead system is the cost of iron pipe. The system consists of a main supply line, running to or through the field to be irrigated; a tank or reservoir of sufficient capacity to give a pressure of 30 to 50 pounds; and a system of laterals or "nozzle lines," about 50 feet apart, running at right angles to the main supply line. About every three feet in these nozzle lines is placed a small brass nozzle. At the beginning of each line a specially constructed union and handle is placed which makes it possible to revolve the whole length of pipe, thus turning the row of nozzles at any angle from one side to the other. The water, forced under pressure through the nozzles, is projected in slim, solid streams, which are broken up at some distance from the pipe, by the resistance of the air, into a fine, mist-like rain.

The water supply may be any clean water capable of supplying 25 gallons or more a minute for several hours. Twenty-five gallons a minute will water about one acre at a time. To irrigate a larger area, at one time, will require more in proportion.

The cost of getting water to the field will vary greatly under local conditions. A small installation, covering only a few acres, can usually be put in for not over $200 an acre. The work of installing can be done by any one who is familiar with the use of pipe tools; or, if desired, the pipes can be bought ready drilled and fitted, nothing being necessary but to put up the supports and screw a few pieces of the pipe together.

It is possible, if one desires to get started with the least possible expense, to use second-hand pipes for main lines, and often good valves and other fittings may be secured. When putting in my own outfit, which was tried out first on one acre, the cost was $235.75, including a two-horsepower engine, which, however, was used for general farm work as well as for pumping. The second acre cost less than $65. These figures do not include posts which we cut on the place, or work of fitting pipes, drilling holes, etc., which we did ourselves. And, of course, pipes and other materials were cheaper before the war.

As it is seldom necessary, even in the driest weather, to water more than once in a week, an outfit capable of watering one or two acres at a time will easily take



Early cabbage under irrigation on a sandy hillside. The "close-up" is a head of all head—weight 16 pounds 15 ounces

care of eight or ten acres if kept going pretty constantly.

As to the cost of operating, it takes about 13,500 gallons of water an acre to give one-half-inch irrigation—equivalent to a good soaking rain, but better, because being applied slowly and evenly, it all soaks in instead of running off and collecting in the low spots. The number of gallons may be divided by the hourly capacity of the pump used, and the per-hour expense of running the engine and pump will cover most of the expense of applying the water. The labor required to turn the pipe occasionally is almost negligible.

The system amounts practically to having an ideal rainfall, absolutely under control, *when you want it*. Any grower must know what that would mean. Certainly, it is worth while to make a point of going to see the nearest field in your vicinity under irrigation, and to try the thing out on a small scale, even if it is only on your garden patch. Many growers using irrigation have told me that they would rather go out of business than to go back to dependence on the weather for the water necessary to grow crops that mean profits.

Fall Gardens Thrive in Louisiana

LATE plantings of potatoes and vegetables often thrive better in the South than those planted in the spring, and an interesting method of starting the tubers is described in a letter received from L. E. Armour of Many, Louisana, who writes as follows:

"For growing a fall crop of Irish potatoes we find no other soil so well suited as a newly cleared creek bottom. This we plow deeply in early summer after we are well up with cultivation of growing crops, and harrow often enough to keep grass and weeds under control.

"In our latitude we can safely plant late in August, but farther north they are planted two weeks earlier. We have found that when the nights begin to grow cooler is an ideal time for fall crops of cabbage and potatoes. Repeated experiments have taught us that as long as both days and nights are intensely warm newly planted vegetables do not thrive.

"Fall-planted potatoes mature in a much shorter time than those planted in the spring. Our greatest difficulty has been failure to secure a uniform stand. We have overcome that by sprouting the tubers before planting. We use a box or barrel boring holes in the bottom and filling with alternate layers of straw and potatoes.

"Keep the barrel in a shady place, and pour on a pail of water each day. In about ten days the potatoes will be ready for planting, when we harrow the ground thoroughly, open deep furrows, and drop the potatoes, which have been cut so that each piece has at least two eyes. Place about 12 inches apart, cover with the furrows with plow, and in a few days harrow again, leaving the ground as near level as is possible."

Team Work in Silo-Filling

By Earl Rogers (Ohio)

AFTER being with a silo cutter for some time I find there are a few things that must be observed by the most of us at will pay you to know and look out for, d if they can be discovered through some- e else they are the means of saving much ne. In this case I am one of the four ners of a cutter that we use for our own rk, and because of that we are looking the very best ways of doing our silo- ing and also saving time and labor.

The first two days that we worked, ere was one man to feed and another to t the bands. The third day we were ort a man, and I hurriedly had a pile of ingles moved up close to the side of the d table of the cutter, and found that by tening the cutting knife on my wrist I uld cut bands and feed as well as two



n. After that I did both jobs. It takes t work, and is harder than most any ier place on the job, except tramping en one is short of help; but it saves a n, and under the conditions the band ter and feeder are in perfect working ty, and so one does not wait on the er.

After the first experience we made a nporary platform and staked it to the chine. It was about five feet long and bably thirty inches wide. It sloped a le toward the carrier and the feeder, so t the bundles that were thrown on the le were apt to slide toward the feeder l just where they were wanted.

In unloading the wagon the driver can p the work along by going slow enough the unloading so the feeder can take e of it. When one man feeds and cuts nds he cannot spare much time for ing one bundle from under another one. e efficient running of the cutter depends on keeping it busy all the time. I don't ow that it is any harder on it than running at the faster speed it will reach when running empty.

One thing that I have been trying to get our set to do is to keep away from a loafing man. There is no need for a man to ride from the field to the cutter and back, when a boy can as well drive the team, for that is all there is to do. Then have the unloading man make it his business to unload, and that only. If he gets too tired, have him change off for a while; but one man will soon learn the wants of the feeder, and the feeder will come to know what to expect of an unloader. This will make quicker and easier work for both.

There is no reason why the driver should not help put on the first part of his load in the field, though I cannot get that idea to working yet. A driver has a nice rest while going from the cutter to the field, and can surely not be overworked. Then there is less waiting, and the two men who are loading in the field will have a better chance to keep in shape. Handling heavy corn bundles all day is no fun, and a loader in the field gets as tired as anyone on the job if he has to work all the time.

In some cases it may be a good plan to change your man from one job to another every few hours, and yet this is not always the best, because when a man becomes accustomed to a certain kind of work he knows just how to handle it. When he tackles another job it is new, and he must get on to it before he can become really efficient. In the threshing rings this idea of one keeping the same work for the threshing season is followed sometimes, and seems to be very satisfactory. There is no assigning of jobs by the owner of the farm, as each man knows just where he is to work.

A little pulley at the top of the sill and a long rope that can be handled from the ground save time and muscle, and also risk of injury to man and machine when the blower pipe is raised. We have found that this same pulley will allow the distributor hood or funnel to be lowered to the bottom of the silo, and the sections of the distributor hooked on piece by piece and drawn up to be hooked on the blower pipe all at one time.

Sharp knives are something else that ought to be looked after carefully. One who works close to a cutter for a half-day will notice the difference in the way it runs. A half-day's work is enough for a set of knives without regrinding them. Some cutters have a device on the machine that can be set in motion at any time, and so an extra man can grind a set of knives while the machine is running.

Use good hard grease for the grease cups. I like a graphite hard oil, as graphite is certainly an improvement on the straight hard oils that one buys for automobile grease cups, and it lasts much longer.

Fertilizer Will Cost Less This Fall

AN AVERAGE reduction of 30 per cent in fertilizer costs to farmers in the tory north of Arkansas, Tennessee, Virnia, and West Virginia is the result of the partment of Agriculture's conferences th fertilizer manufacturers. Statements reductions of prices for the South and ier territories will be made as soon as ey are agreed upon.

The scale of prices as issued applies to alers and farmers ordering 30-ton lots, d is based upon delivery in 167-pound gs. Where less than 30-ton lots are dered, there must be added a fair dealer's ofit of about $2 per ton, and where 200-und bags are used 25 cents per ton can deducted. In 125-pound bags 25 cents r ton should be added, and in 100-pound gs the cost is 50 cents more per ton. A scount of five per cent is made if paid in sh by December 1st, and a further disunt of one-half per cent is made for each nth in advance of that date.

The prices as quoted are all f. o. b., and e based upon costs at the three great tilizer distribution centers—Baltimore, aryland, Philadelphia, Pennsylvania, and rteret, New Jersey. Costs at the varis other distributing points are deterined by the freight charge to that point m any one of the three above cities.

Without fixing prices, the Department Agriculture has been able to effect this eat saving to the farmers through conferences and correspondence with the various fertilizer manufacturers, acting under the terms of the Food Control Act, approved August 10, 1917, and the President's regulations dated February 25, 1918. The Department is also investigating the differential in delivery rates in different parts of the country, which have prevailed in the fertilizer trade for several years.

L. N. W.

You Can Still Make Money Growing Barley

EXPERIMENTS at the Wisconsin Experiment Station show that barley will surpass corn as a ration for fattening hogs if it is properly fed. Twelve lots of pigs were fed, using with some a corn ration, while the others were given barley. The return for each pig over the cost of feed was $14.38 for the barley-fed pigs, and $12.38 for the corn-fed porkers.

One of the most interesting facts brought out was the value of a barley and whey combination, which netted a handsome return, and the gains made with this ration were very rapid.

If you are in a region which is suited for the production of barley, or if you have been using it as a nurse crop for alfalfa, do not be discouraged by the prospect of a lower price, due to the curtailing of the use of barley in the brewing industry. Perhaps it will pay you more than ever as a feed for your hogs and your other live stock.

W. A. S.



Millions of Germs Breed in Tooth Film —Keep It Off

All Statements Approved by High Dental Authorities

Film Wrecks the Teeth

THAT slimy film which you feel with your tongue causes most tooth troubles. The tooth brush does not end it. The ordinary tooth paste does not dissolve it. In crevices and elsewhere that film clings. That is why your brushing fails to keep teeth white, free from tartar, clean and safe.

That film is what discolors—not the teeth. It is the basis of tartar. It holds food substance which ferments and forms acid. It holds the acid in contact with the teeth to cause decay.

Millions of germs breed in it. They, with tartar, are the chief cause of pyorrhea. So all these troubles have been increasing despite the wide use of the tooth brush.

Dental science, after years of search, has found a film combatant. Able authorities have amply proved this by careful clinical tests. Leading dentists everywhere now urge its daily use.

The method is embodied in a dentifrice called Pepsodent. And we offer a 10-Day Tube free now to everyone for home tests.

See the Results, Then Decide

The results of Pepsodent are quickly apparent. Some are instant. We ask you to see them—watch them ten days—then decide for yourself about them.

Pepsodent is based on pepsin, the digestant of albumin. The film is albuminous matter. The object of Pepsodent is to dissolve it, then to constantly combat it.

Pepsin long seemed impossible. It must be activated, and the usual agent is an acid harmful to the teeth. But science has discovered a harmless activating method. The inventor has been granted patents by five governments already. It is that invention which makes possible this efficient film combatant.

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CALVÉ	OESTINN	GLUCK	MARTINELLI	POWELL	WERRENRATH
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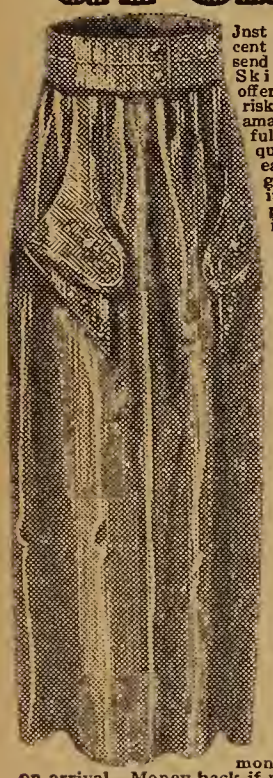
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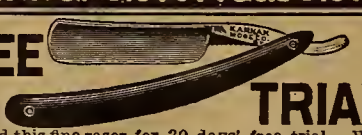
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The Call of Home

[CONTINUED FROM PAGE 27]

of cooking meat; and he saw a big warm kitchen, with a cat dozing by the stove, and a fat old negro mammy bending over steaming kettles and sputtering skillets. Then hungry saliva dripped from his mouth to the floor and he choked and swallowed.

Again, on chilly nights, when he glimpsed through the chinks a glow in the windows of the shack, there came into his mind a roaring fire of oak logs, and a big living-room, with a man and a woman and a little boy around the fire, and a gun standing in the corner with a hunting coat draped over it. Then he raised his big head, and looked about his prison with eyes that glowed in the dark. It was at these times that he leaped over the boxes and began to gnaw fiercely at his board.

But maybe even old Frank's stout spirit would have broken, for hope deferred makes the heart of a dog, as well as the heart of man, sick; maybe he would have ceased to gnaw at his board behind the boxes; maybe he would have yielded to the men at last, submissive in spirit as well as in act, if he had not seen the train, and the woman, and he little boy.

They had taken an unusually long hunt, out of their accustomed course. He had managed to get some distance ahead, pretending not to hear the shouts above the wind; the bird shot they had sent after him had only stung his rump, bringing from him a little involuntary yelp, but not causing him to turn. The wildness of the day had infected him. A high wind blowing out of a sunny, cloudless sky ran in waves over the tawny level fields of broom straw, and from a body of pines to his right rose a great shouting roar.

Suddenly out of the south a whistle came screaming melodiously on the wind. He galloped at an angle to intercept it. Out of the body of pines a long train shot and rushed past, the sun flashing on its sides, its roar deadened by the roar in the pines. Just behind it, among leaves and trash stirred into life and careering madly along, he leaped on the track.

A glimpse he caught of the brass-railed rear platform, where a woman rose quickly from a chair, snatched up a boy smaller than Tommy, and held him high in her arms. The boy waved at him, the woman smiled brilliantly, and he ran after them, leaping into the air, barking his hungry soul out.

But the waving woman and the smiling boy whirled away, and in that desolate country a big Irish setter stood between the rails, and looked with straining eyes after the vanishing rear of the northbound Florida Limited, overhung by coils of smoke.

That was what had brought him down here. Those long, flashing rails led home! He stood oblivious of everything else. He did not hear the shouts, he did not see the burly man jump off his mule, cut a stick, and hurry toward him, gun in hand.

He had endured much during those evil days. But what followed was that which neither man or dog can ever forgive or forget. At the first blow he sprang about, mad with rage, but the man held the gun—to spring was to spring to death. He dropped down at the man's feet, and laid his head over the rail. He did not cry out. But the blows sounded hollow on his gaunt ribs, they ached sickeningly into his very vitals.

IT COULD have had but one ending. Another blow and he would have leaped at the man's throat, and to death. But the other man was rushing at them. "Great God, Jim," he cried, "let up! You want to kill him?" White of face he had grabbed the stick and the two stood facing one another. From the pines still rose the great shouting roar.

They came home through the dusk, a silent procession; the burly man rode in front, then the other man, and behind, with drooped head and tail, trotted old Frank. Now and then in the gathering gloom the men looked back at him, but not once did he raise his eyes to them.

"I guess I learned him his lesson, Sam."

Sam did not reply.

"I'm gettin' tired of waitin' anyhow."

Still Sam did not reply.

And his silence must have had its effect. For when they reached home the burly man made the dog come into the shack. The wind had died down, the night turned chilly, and they let him lie down before the fire of pine knots. The woman brought him a pot of hominy; the men felt his ribs as gently as they could. He shrank from th touch more than from the pain. Kindne had come too late, even for a dog.

He lay before the hearth, indifferent t all that happened in this shabby roon for the sight of this fire had made him s another and kindlier fire, in another an kindlier world. These people did n notice his growing restlessness, his furti glances, his panting breaths, the burnir light in his eyes. For steps had come up t the porch; somebody had knocked at th door; the night of their fortune was her

The burly man hurried to answer, shal ing the floor. The open door showed negro who handed in a paper. Somebod had sent it from town, he explained, an was gone. The woman snatched the pape Heads close together, the three stood abo a smoking kerosene lamp. The woma was reading in a whiny, excited draw "'One thousand dollars reward for—'

"I told you so!" burst from the burl man.

"Shut up! Listen!" cried the other.

"'Irish setter,' she read. "'Answers t name Frank. Notify R. A. Lancaster'—O here's a lot of streets and numbers—'Ne York City'; or,'" she read on, "'Steve Earle, Breton Station, Virginia.'"

"I told you'se!" the burly man w shouting. "I told you I knew a dog when saw one! Look at him, Sam! Look at th head! Look at that dome above the ear Look at that hair—like silk! The mold th dog was made in is broke!"

"One thousand dollars!" gasped th woman. "One thousand dollars!"

WHEN the two men came out with hi to his prison the excitement was st rising. The woman had already gone in another room, and the men had got out bottle. Their voices as they bolted h door and propped a pole against it sounde loud and thick. They stamped up th steps, and he could hear them laughing an shouting in the shack. Surely they cou not hear him gnawing—gnawing frantical at his board behind the boxes. They cou not hear him jerking at the end of the boar freed at last from the sleeper below. The could not hear the board give way, throw ing him on his haunches. Surely they cou not hear the little bark that escaped hi when the floor opened.

But out in the yard, free at last, he sat suddenly down flat, head between h paws, very still. The back door of th shack had opened and the light shone ou across the littered yard, up the walls of h prison, into his very eyes. The bur man had stepped out on the porch.

It was one of those hollow nights whe sounds carry far, when a spoken word is shout.

"I don't hear nothin', Sam."

The other man staggered out.

"Maybe it was a rat," he said.

He could almost hear them breathing.

"Guess I imagined," said Sam.

"Sure," said the other.

Their figures darkened the doorwa The burly man clapped the other on th back.

"What I tell you, Sam! One thousand—

The door closed. The merriment wo go on till morning. And old Frank, muscl limbering as he ran, soreness passing out his side, was galloping through the nigh toward the railroad—and home.

Morning found him loping easily alon the railroad, nose pointed north like compass. Now and then he left the trac to let a train pass, looking at it, if it we north, with wistful eyes, then keeping sight of it as far as he could. He passed few small stations with big water tanks, crossed long, low trestles over boundle marches, he came at dusk to a village.

Hungry, lonely, he approached an u painted cottage on its outskirts. Two do rushed at him; he faced them, and th turned back. He trotted on, hair risen an angry tuft down his back. He sle curled up in an abandoned shed, but n long. The morning stars lingering low ov the flat horizon kept pace with him, then sea of mottled pink clouds, then the hu red face of the rising sun.

At midday he pounced an animal li a muskrat that tried to cross the track a tough thing to kill, a tougher to eat. dusk he drew near a farmhouse, where man was chopping wood. The man pick up a stick, ordered him away, then went chopping.

He made no more overtures after th

[CONTINUED ON PAGE 36]

A Harvest Home Party

By Emily Rose Burt

A "RED EAR PARTY" is what they called it in the invitations. It was the opening party of the year in the high school and the seniors planned it.

The cards of invitation they sent out said:

At this time o' year
You'll recall the red ear
(It never will go out o' date),
So the members of "twenty"
Have planned *fun* aplenty
At a regular Harvest Home Fête.
You're invited!

The school hall was delightfully decorated, with emphasis on the autumn colors. Bright, tawny leaves banked the platform where the orchestra sat, and the globes of scarlet and orange balloons flamed among the soft tans and browns of the cornstalks stacked along the side walls. Depending from the ceiling and hanging in the windows myriads of gay red and orange paper lanterns swayed brilliantly.



The Scarecrow Skitter

The dance programs were "red ears" cut from cardboard, and tiny red pencils dangled from them. Some of the names of the dances seemed to pique people's curiosity, such, for instance, as: The Cornstalk; the Scarecrow Skitter; Farmerettes' Fancy; Popcorn Waltz; Orchard One-step; Pumpkin Pie Walk; Red Ear Dance; Harvest Home Revue.

The "Cornstalk" was in the nature of a grand march, everybody stalking stiffly round and round in time to the music, the leaders finally breaking into a romping one-step and the others following suit.

Then followed the "Scarecrow Skitter." A dilapidated old cornfield character, in all his crudity of flapping black, was brought in and established in the center of the floor. In the band of his shabby hat fluttered a handful of rusty crow feathers, and the feature of the dance was for each boy to secure one of these, in passing, for his partner. The poor old fellow was nearly torn to bits in the process.

"Farmerettes' Fancy" was another name for "Ladies' Choice." All the girls were given tiny toy rakes, hoes, spades, and other farm implements, which they used as favors in choosing partners.

For the "Popcorn Waltz" the favors were popcorn chains for the boys to hang around their partners' necks. There was a temptation to devour these adornments as well as to use them for decorative purposes, and so they were a source of much fun. The orchestra at intervals in this dance made use of some contrivance which sounded like corn popping briskly over the fire. A shower of snowy-white confetti from the balcony still further emphasized the popcorn idea.

In the "Orchard One-step" the boys were invited to pick peaches. The girls stood behind a high screen and thrust their right hands above it. The boys reached up, touched the "peach" they chose, and thereupon the girl thus designated one-stepped away with her partner.

Instead of a cake walk, a "Pumpkin Pie Walk" was announced. The contestants could indulge in just as crazy, funny, or pretty dance steps as they liked. The reward to the cleverest and most amusing couple was a big pumpkin pie.

In the "Red Ear Dance" the girls were blindfolded, and asked to pick an ear of corn from a big basket. When vision was restored the girl holding the one red ear was acclaimed the Queen of the Carnival, and was presented with a bouquet of red roses. During the dance a red glow from the lighting arrangements flooded the hall.

The "Harvest Home Dance" was the supper dance. Paper costume caps suggesting fruit and vegetables were given out, and worn so that the whole room seemed to be filled with a harvest medley. Tomato, carrot, corn, apple, wheat, squash, grapes, popcorn, watermelon, and blackberry were all represented.

The supper dance occurred, of course, midway in the evening. The other novelty dances were interspersed each side of it throughout the evening.

The supper consisted merely of peach ice cream served on grape-leaf doilies, nut macaroons, tiny pumpkin pies, and fruit punch.

NOTE: A description of the ten costume caps for the "Harvest Home Dance" will be sent on receipt of a stamped self-addressed envelope. Address Entertainment Editor, FARM AND FIRESIDE, 381 Fourth Avenue, New York City.

Some Things Soda Will Do

By Nancy D. Dunlea

SODA is a splendid deodorizer for any utensil. A teaspoonful of soda boiled up with a little water in any kettle in which fish has been cooked is the finishing touch in cleaning the kettle.

Occasionally it is good to clean out the coffee and tea pots by placing a teaspoonful of soda in the pots, filling them three quarters full of cold water, and bringing the solution to a boil.

A teaspoonful of soda in a cup of warm water is an antiseptic gargle.

A little soda in warm water makes a soothing bath for any rash such as hives.

A pinch of soda in the water in which flannels are washed will soften the water and whiten the flannels.

A little soda added to tomatoes before tomatoes are added to cream of tomato soup will prevent the milk from curdling.

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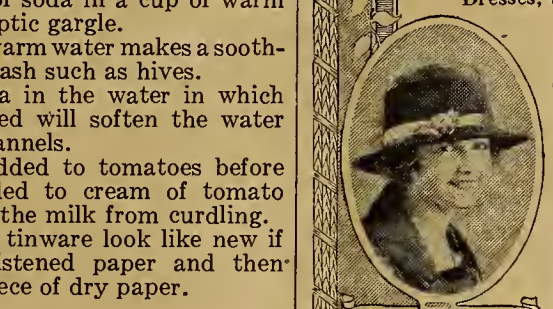
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The Call of Home

[CONTINUED FROM PAGE 34]

but many a farmer thought a fox had been among his chickens. Habits of civilization had given way perforce to habits of outlawry. Only as he galloped north day after day his eyes still shone with the eager light of the bird dog's craving for human companionship and love.

The number of tracks that branched out from the city whose environs he skirted bewildered him for a minute, then he took the one that pointed due north. All the days he traveled, part of the nights. Sometimes at first he had wondered why he did not reach home, at last to travel always north had become a habit, and he wondered no more.

But the time came when he could not keep on going as fast and as long as formerly. There were days when he found hardly anything at all to eat. The endless ties passing under him began to make him dizzy and faint. His long hair was matted; his ribs showed; his eyes grew haggard. It was a wonder the young man knew him for what he was.

He had come into the freight yards of a town at nightfall, in a cold, driving rain, a bedraggled, forlorn figure, a stray dog. A passenger train had just passed him, stopped at the station ahead, then pulled out. A light glistened down wet rails into his hungry eyes and blinded him. Rows of silent dripping box cars hid the man crossing the track at the street. Frank almost ran into him. Both stopped. The man was buttoned up to his neck in an overcoat, and carried a satchel.

"Hello!" he said.

Frank started to slink back under a box car.

"Come here!" He stooped down and looked into the dogs eyes. "Where did you drop from?" he said. "You come with me! Let's talk it over."

In a warm, firelit cottage room a young woman ran to meet the man—then for the first time she saw the dog.

"Why, John!" she cried. "Where did you get him?"

"He got me," laughed the man, "on the way home from the station. He's starving. Get him something to eat. Then I'll tell you about it."

She glanced at a cradle, whose covers were being suddenly and violently agitated.

"I'll answer for this old fellow," assured the man, "He's seen better days. I think I've seen him before."

Out in the bright little kitchen, where they scraped together all the scraps they could find, he went on:

"Of course I may be mistaken. But at a little station up here in Virginia, where I sell goods sometimes, I used to see a big red Irish setter following a tall man and a little boy. I think they lived out in the country from there. The kind of folks and the kind of dog you don't forget. If it wasn't so far—hang it, I believe it's the dog anyhow! Well, we'll take good care of him, and next week when I go through I'll find out."

The young woman in a rain coat came out in the back yard and held the streaming lantern while the man arranged some sacks underneath the porch and closed and bolted the back gate. He heard them go up the back steps, heard them moving about in the house. Like a decent old fellow he licked the rain from his silken coat, smoothed out the matted strands, then curled up comfortably in his dry bed and slept deep and long.

HE STAYED with them a week, while strength returned to his muscles, fire to his eyes, courage to his heart. But as he lay before their hearth at night he saw always in his mind that other fire—the fire of home. The stars were still shining that morning when he scrambled over the high back fence and was gone.

But it was with new life and confidence that he continued his journey. He slunk no more on the outskirts of towns; he passed boldly through. Fortune favored him now; on the second day after he left them he ran into snow, and rabbits are almost helpless before a swift pounce in the snow.

The drifts grew deeper as he traveled north. Fields of dead cotton stalks gave way to fields of withered corn stubble, yellow, broken rows on white hills. There was an occasional big farmhouse now, a house with white pillars like his master's, set in a grove of naked oaks. And at last, following fence rows and hedges, lines of cylindrical cedars climbed over and over high hills. The look of home was on the face of nature, the smell of home was in the air.

It was a bitter cold afternoon when the mountains first took shape in the distance. He could make them out, though the sky was heavily overcast. Those were the mountains he saw every morning from the back porch of his home. He barked at them as he ran. He would lie before his own fire this night.

At dusk sudden hunger assailed him. On a hill sat a big farmhouse, the windows aglow, smoke veering wildly from the chimneys. And on the wind came the smell of cooking meat. He stopped on an embankment, pricked his ears, licked his chops. Then he scrambled down the embankment, and like a big fox made his way along a fence row toward that house from whence came the smell of cooking meat. At the same time flakes of snow began to drive horizontally across the white fields.

SUDDENLY from out the yard two stocky cream-colored dogs rushed at him. They came with incredible swiftness through the snow, considering their short bench legs. Frank waited, head up, ears pricked. One was a female; it was she who came first. He would not fight a female; he even wagged his tail haughtily. But in a twinkling she was under him, and had caught his hind leg in a crushing, grinding grip. He lunged back, snarling, and the other dog sprang straight at his throat.

He was down in the snow, he was on his feet again, he was ripping the short back of the dog at his throat into shreds, his fangs flashing in the dusk. He was dragging them by sheer strength off toward the railroad; but he could not tear that grip from his hind leg, nor that other grip from his throat.

He did not cry out—he was no yelping cur. But it was growing dark, the air was full of snow, the grip was tightening on his throat, the other grip had pulled him down at last to his haunches. Then two men came running toward them, the one white, the other black. The white man grabbed the dog at his throat, the black man the dog under him. The white man was pounding the dog's nose with his fist, was cramming snow down his bloody mouth.

"They'll kill him, Will!" he panted. "Go get some water to throw in their faces!"

The black man disappeared running—came back running, a bucket in each hand.

And now it was over, and off there the white man held both his dogs by their collars. They were panting, their wrinkled eyes half closed, their mouths dripping bloody foam. For many yards around the snow was churned into little hillocks. And there lay old Frank, panting hard, head up, eyes shining.

"Pick him up Will!" said the white man. "His leg's broke."

"Cap'n," said the negro, "I'm afraid of him."

The white man swore, shaking his dogs angrily. That was some man's bird dog—a fine one too. They would have to get the sled. They went off to the house, dragging the two dogs with them. When they hurried back with the sled the wounded dog was gone. They followed his blood-stained tracks to the railroad and up the embankment. They looked at them between the rails—they were fast filling with snow. The white man put his hands to his ears.

"He'll freeze to-night," he said.

In the teeth of the wind, like a three-legged automaton, Frank was fighting his way doggedly through the night. The wind almost blew him off the embankments; the swirling waves of snow choked him. Maybe he would have lain down, maybe it would have happened as the man said, if it had not been for the spirit within him and for what he saw.

Just before him the superstructure of an iron trestle rose penciled in snow against the night. Far below a black river wound serpentine into the mists. In those dim bottoms on either side he and his master had hunted a hundred times. The birds had scattered on those wooded hills, now vibrant with the blast. Out on this trestle he picked his slow, hesitating way.

Suddenly he cried out sharply. A mighty gust of wind striking him in midair, and almost hurling him off into the blackness below, had caused him to put down as to brace his wounded hind leg. Gasping

[CONTINUED ON PAGE 39]



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Better Babies

What Their Parents Think of Our Bureau

I KNOW I've been a long time thanking you for your helpful letters, but I certainly have appreciated and profited by each one of them, both before and since the arrival of our dear little daughter.

Through very unfortunate circumstances I was unable to nurse my baby after she was two weeks old, but with the help of your advice and one of the books which you recommended, I have been able to bring her this far along the way (she is now thirteen months old) without a single day's sickness. You certainly are helping when help is needed.



It has been both interesting and gratifying to me to note that, while some of our other popular magazines are publishing articles that can only make women feel that theirs is a deplorable and unappreciated lot, you are teaching wives and mothers to regard motherhood as the high and holy privilege that it is, and to care for themselves and their babies so that both may be healthy and happy.

I do feel so grateful to you for the help you have given me, and I heartily commend your good work.

Mrs. A. E. S., Mississippi.

Does Not Begin to Compensate

I enclose card herewith giving name, date of birth and weight of our daughter. My wife and baby, I am very happy to say, are doing very nicely.

My wife desires me to express to you her great appreciation of your various letters and papers of advice, which she has found to be most invaluable. We both feel that your Better Babies Bureau is doing a wonderful work, and wish that everyone possible having need of it could take advantage of it. You are doing a work which is of great service to the nation in bidding for a better generation.

We desire to continue to receive your letters, etc., and accordingly enclose 50 cents (I believe this is the correct amount), although it does not begin to compensate in any way for the value and benefit of the advice. I wish you continued success, and trust you will continue to give your Bureau the greatest wide-spread publicity possible, so that all may share in it.

F. C. B., New York.

He Greatly Approved

You will find enclosed 50 cents, for which please enroll me in the Mothers' Club. My little "better baby" is now nearly five months old.

I was a member of the Expectant Mothers' Circle, and received much help from it. The letters were devoured by my husband and myself, and long ago passed along to another woman who is here away from all her relatives. It would have done your heart good to hear my educated husband expand his knowledge to the poor ignorant one. And how proud he was of the clothes made by me! It was the *first* sewing I had ever done.

Well, to make a long story short, it was neglect on my part that I have not enrolled before this, and now, with my baby teething, I feel very greatly the need of expert advice, and immediately am sending for it. My physician just says, "Follow your letters," so I have confidence in your judgment. You see, he knew I had your other letters, and greatly approved.

Mrs. J. E. C., Pennsylvania.

Every Letter a Source of Cheer

At last I have put my good intentions into action. Ever since I received your first letter of welcome into your circle, my heart has been filled with gratitude. Never can I forget those beautiful words of encouragement. Not only the first but every letter which I received has been a source of cheer and comfort to me.

I am about all prepared now for our little expected darling, and many, many thanks for your information regarding baby's layette, etc.

If all goes well after baby is born, I will send the required fee, and thus have my letters continued, for I feel now that I could not get along satisfactorily without your help.

Mrs. W. E. J.

The Reason for the "Best Baby"

I am enclosing post card announcing the arrival of our "better baby," also 50c the letters of advice each month. Really, I could not possibly begin to tell you what a wonderful help your letters were to me before Baby René came. I always knew just about when to expect them, and sometimes I could hardly wait. I followed your advice in every way possible, and I'm sure that's the reason we have such a "best baby."

Thank you just ever so much for all your "Hints and Helps."

Mrs. F. A. A., N. Mexico.



What the Better Babies Bureau Is

And how to secure its help

THE EXPECTANT MOTHERS' CIRCLE: Any woman eligible, whether she is a subscriber or not, may become a member, receiving each month a letter of advice on the care of herself and the preparation for her baby. Several practical little pamphlet circulars showing designs for maternity dresses and a common-sense layette are some of the helps sent with the letters. No matter at what period you enter, everything from the first month will be sent. No mention of the Better Babies Bureau is made on the envelopes in which the material is mailed. Enclose a self-addressed envelope with *Fifty Cents* in stamps, for postage, *and state what month you expect your baby.*

THE MOTHERS' CLUB: Every mother of young children is eligible and need not be a subscriber to join. Pamphlets, together with monthly letters of instruction on the care and feeding of babies *under one year of age* (covering such subjects as colic, constipation, weaning, teething, etc.), will be sent to any mother who sends *Fifty Cents* in stamps and states the age of her baby. There are also leaflets giving diet lists, and other helps for babies from one year of age to three years. This literature is all included in the Mothers' Club's monthly service, but if the letters are not desired the additional literature will be sent for *Ten Cents.* A self-addressed stamped envelope will bring a prompt reply to every inquiry. Address all inquiries to

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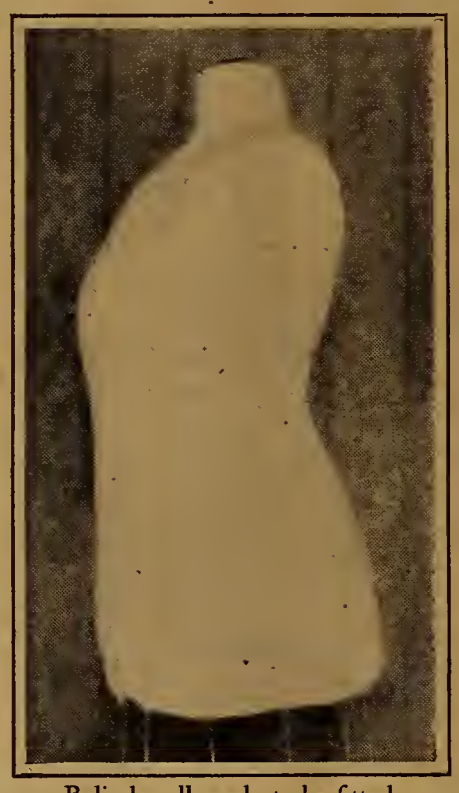
Belinda, My Double, and I

By Nina Willard Wallace

I DO love to wear pretty clothes—not of necessity expensive ones, but the kind of clothes that just suit my individual style as to line, color, and general becomingness. Now "line" with me means as straight, long effects as possible. I am short, and, well—not as slim as I used to be, *and* I insist on going corsetless. I hold myself well, chest out, abdomen in, but there are certain requirements for the corsetless figure, and the best dressmakers even do not seem to get the right idea. I always knew that I could "do" my own dresses if I could just take my bodily self off myself and drape the dress materials on myself, *myself*. So I should be perfectly suited, and my pocketbook would not wear the crushed appearance every season just after the usual dressmaking orgy has been completed.

The first thing I did before I invited Belinda to dwell with me was to price and examine several kinds of adjustable dress forms. As my figure has its peculiarities, none of these would do except the very *most* adjustable ones, costing $18 or $20. That amount was needed elsewhere. Here's what I did:

I bought a non-adjustable dress form at a sale for $4.75. This, the saleswoman assured me, should be 38 inches bust measure (I'm 37, and 41 inches at the hips, I being just that measurement at this line). But I knew this would not do, as I would have to pad the dress form up to suit my own figure, not only in measurements, but also in appearance. So I bought a dress form one inch less bust measure, two inches hip measure less than I wanted, and many, many inches less at the waistline. I have all my clothing, belts, etc., made 31 inches around the waist.



Belinda, all ready to be fitted

Let me digress long enough to say that if you who wish to go without corsets, or who have been under the impression that you have a "middle-aged" figure (under wise management you needn't have), would have your dresses made in one piece, straight lines running from neck or shoulder to hem, or with belt so loose, when you wish to wear a belt, that it merely holds the garment in shape but does not accentuate the waist line, nor bring into prominence the curve at the hips, you could be actually graceful, though fat. Long lines, very loose waist measure, belt a trifle raised at back, a bit lowered at front—these will give you style and grace, and may just as well be a part of the work or house dress as of the dress for more formal occasions.

IN building up "Belinda," my name for my dressy friend, I placed heavy pads wherever they were needed to be a replica of me. "Know thyself," as to bodily proportions at least, is one's only guide in this part of the preparation for making one's own wearing apparel.

I found that two thicknesses of carpet rags wound around the neck of the dress form brought that measurement up to the correct number of inches. A good heavy pad of cotton batting was placed up and down, starting at waistline in front, some as heavy were fastened at the sides, back of the hip bones, more across the back several inches below the waistline, to make Belinda look like me. Belinda originally had a rather flat chest and sloping shoulders. A very well-rounded chest and square shoulders were needed; in fact, the so-called "perfect" figure wouldn't do at all, and cotton was used unsparingly wherever needed.

During Farmers' Week at the Home Economics Building, Cornell University, Ithaca, New York, I had the privilege of hearing thrift lectures on dress as well as on other subjects, of seeing excellent clothing demonstrations, and I had the honor of adding my share—a made-over coat, which now is a stylish coat-cape—to the success of the work done there.

The clothing authorities there advised us to buy the non-adjustable dress forms. Those on exhibition were built up with swathes of tissue paper. Tissue paper in such quantities was not obtainable. I had unneeded cotton batting in the house, and to some extent I used this, and my own judgment. I might have used old cotton cloth in layers. I have used carpet rags somewhat, but thus far am finding the cotton pads, as suggested, to be very good indeed. After pinning the cotton to the jersey covering I did use tissue paper, winding it around and pinning it fast wherever it was required to smooth off the curves which the cotton alone would have left rather bunchy. Tissue-paper patterns no longer in vogue are good for this purpose.

Meanwhile I had made a stout unbleached muslin waist. This waist fitted not only very smoothly, but almost like the bark on a tree. As the demonstrator at Ithaca said to me, "It must *be* you." This waist was left open at the back and was so tight on the built-up dress form that it had to be pulled into place and pinned at short intervals before it could be sewed up with coarse white thread. Then the pins were removed, and behold, Belinda!

It's simply astonishing to me, a woman who believed she could not make her own clothes, what I have been able to accomplish with the aid of my dummy double. First I practiced on clothes that were worn frequently. You know how even the best of them will, after a few wearings, dip here, shrink there, stretch in another place. I found that I could bring them into line with very little effort. Before this I had had to turn myself almost wrong side foremost whenever I wanted to see whether a garment fitted me or not. Next I made over some old garments into new-looking ones. After that I made some brand-new princess slips.

If you're built like Belinda, don't wear separate skirts and corset covers. Have all your underwear hang with its weight on your shoulders, waist belt very, *very* loose. I seldom wear belts on my undergarments.

The woman who loves pretty clothes (who doesn't?), the woman whose money expenditures for personal use must be limited, the woman who has no other adult member of the family for whom she must make dresses, and the woman who would like more and better materials for her clothing will find a Belinda a great help, a very inexpensive experiment, and—well, just invite into your home a dressy friend like my Belinda. She's worth, if not her actual weight in gold, at least a very considerable bit of it.

Oil the Machine

By Fern Laurence

SOMETIMES my sewing machine becomes gummed, and refuses to move so I pour coal oil into the oil holes, take the thread out of the needle, and run the machine. The coal oil soon cuts the dirt and gummed oil. Then I wipe off all the coal oil, and oil with a good quality machine oil.

This knowledge has saved me sending for the repair man a number of times; it also has saved me much time. It is a very simple thing, and yet many women neglect it.

WHEN STITCHING—If the belt on your sewing machine is a little loose and slips when operating the machine, rub the belt thoroughly with a piece of resin.

Mrs. F. F. W., Vermont.

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The Call of Home

[CONTINUED FROM PAGE 36]

trembling, he lay down for a minute on the whitened ties, one leg hanging through. Then he rose and doggedly picked his way on.

On the high embankment at the other side he stopped, and, in spite of the blood stiffened under his throat and the water frozen on his shoulders, he raised his quivering nose. Beyond those misty bottoms, to the left, over those storm-swept hills, lay home.

Halfway down the embankment he cried out again. He had slipped in the snow and fallen on his leg. Under the shelter of the embankment he rested for a minute, panting as if the night were hot. Then lunging, tottering, falling, rising again, panting, gasping, but never another cry, old Frank fought his way up those bottoms, turned to the left, dragged himself over the hills, dragged himself home!

BELLY deep in drifted snow he stood at the corner of the lot fence and surveyed the white distance that lay between him and his kennel—more unattainable to his weakness than a quarter of a continent had been to his strength. And while he stood there the roaring of the wind in the great oaks overhead, the cracking of their naked branches, the swirl of snow against his nose and in his eyes, bewildered him, and suddenly something deep within him whispered to him to lie down and rest.

But the sudden terror of death lurked in that whisper, and head dragging in the snow he staggered across the yard toward his kennel. In here he would crawl and hide from that fearful thing that had told him to lie down in the snow and rest. He reached the kennel, he touched it with his eager nose, he tried to root his way in between the slats he had not known were there. Then gasping and helpless he sat down before it. The door of his kennel was nailed up. The great hulk of the house loomed dark and silent above it. Maybe his people were gone!

With this new terror in his heart he fought his way around to the side of the house. Underneath his master's window he raised his head and tried to bark. But the wind snatched the muffled sound out of his throat and hurled it away into the darkness. Once more the still small voice that terrified even while it soothed pleaded with him to lie down and rest. Maybe he would have listened now, maybe he would have yielded, if he had not seen through the living-room curtains the sudden flicker of firelight on the ceiling. They were not gone—they were only asleep. Tail wagging strangely as if someone in there had spoken to him, he rose for the last time and struggled toward the front of the house. At the corner a gust of wind, waiting in ambush, rushed at him, and stopped him where he was. A moment he waited for it to die down, then dragged himself to the steps, up the steps, his ruined hind leg hitting each one like a rag tied in a knot and frozen,

Before the big front door he sat down and raised to it his suffering eyes. A hundred times it had opened to his whim, now in his need it barred his way. Gathering all his remaining strength, he raised his paw—the paw he shook hands with—and scratched. There was no sound from within.

Once more—it would be the last time, so heavy had his leg become—he raised his paw and scratched. Then careless of all things, of master and mistress, of life and death, he sank down before the door and laid his head on the sill.

HE NEVER knew how it happened. He only knew there was a burst of light in his eyes, and somebody had picked him up. Then faces were bent close to him; something hot and gagging was being poured down his throat; a voice—the most commanding voice in all the world—ordered him to swallow, swallow. And now he saw before him, as he lay on his side, a roaring fire whose flames licked and twisted among oak logs piled high into the chimney.

Strange that he had not known that fire all the time; that he had not known who these people were. But then he had been on a long journey, and he was tired, very tired. He must tell them he knew now, let them know he appreciated what they were doing. He always did that even with strangers, and these—they were his master, his mistress, his Tommy.

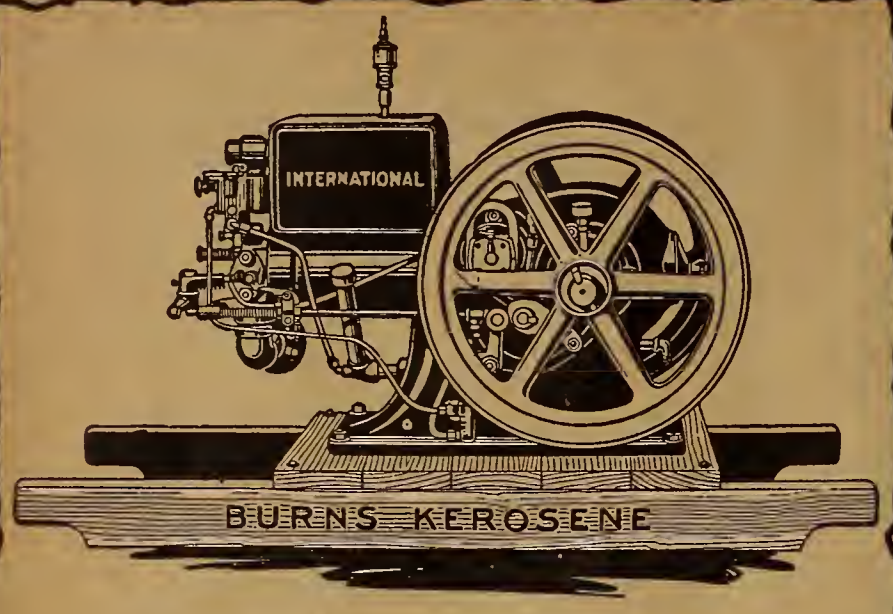
It was Tommy's shrill voice that broke the silence.

"Look, Papa, look, look! He wagged his tail. He wagged his old tail!"

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Poultry for the Farm Woman

By Bertha L. Smith (Ohio)

THERE have been so many articles in the various agricultural papers concerning the raising and feeding of chickens, the trap-nesting of hens, and the proper proportion of meat scrap and charcoal in their daily diet, that we farm women find ourselves in a net of technical terms, with a buzz of protein, carbohydrates, and mineral salts in our ears. Since but few of us aim to be specialists, I think it is time for a swing of the pendulum, and that we will fare better to get back to the good old-fashioned common sense of our forbears, plus the knowledge that our study of the efforts of the experts in this line has given us. I will confess that I have been a "follower," and have tried out many and various fads of feeding and raising, and have thus spent much valuable time that sober afterthought convinces me could have given better returns.

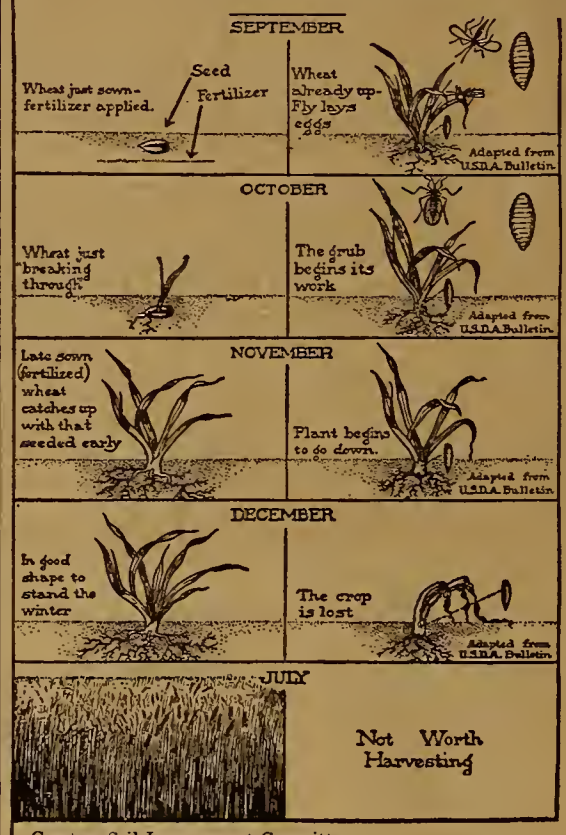
I have a good farm flock of thrifty hens. They probably will not maintain as high an average egg yield as the carefully nurtured specialist's flock, but why should they? The cost of feeding does not have to be taken into consideration, because the food is raised on the farm and consists mainly of by-products and "screenings." Don't adopt a diet and stick to it through all seasons, and at all times. Why? Because one year there may be a superabundance of "nubbin" corn, another year the wheat may yield a quantity of "light" grains, and another will find "oodles" of small potatoes, turnips, carrots, or underdeveloped cabbage heads to add to the food. But do try and maintain a balanced diet; study the specialist's articles enough to know what element each food you possess has, then go ahead and use what you have.

For instance, I never buy meat scraps in the winter. There are the "cracklings" and all the "off-fallings" of butchering time to be garnered, and there is a plentiful supply of sour milk, and commercial meat scrap is a superfluity. If you burn wood in any of your stoves, as I do, the question of charcoal is solved; you can crush or grind it yourself. Sand and gravel are hauled in from a near-by creek each year, meaning a half-day's work for the man and a team. I do have to buy the oyster shells. This winter, having a lot of common navy beans that were discolored by a quick shower after the vines were pulled, I used these in the mash, thoroughly cooked, and found my hens greedy for protein in this form.

I have no quarrel with those who prefer incubators. It's all a matter of taste. For maintaining my flock of 100 hens, and having all the fried chicken we wish to eat, I use the old "settin' hen." My flock consists of pure-bred Barred Rocks. I would insist that it does not pay to raise mongrel stock. I set enough hens in March or early April to raise the pullets for the next year's stock; that is to be assured of at least 60 well-developed pullets maturing. I always retain 40 yearlings; they make good early spring layers, and are ready to do the mothering of the coming flock. The cockerels resulting from this early hatch are used generously on the home table, and the surplus can be readily converted into a pretty hat or a cool summer dress.

Now, right here I digress from all the good advice of poultry raisers. I have chickens hatch after April. I have small or colony houses that can be easily moved. I plan to have about 50 chicks come off so that I can put them with a mother hen into the oats field, after the grain is cut and hauled; another bunch goes into the wheat field, and perhaps another in the clover patch. After the first ten days these flocks actually raise themselves. I see that they have water, sour milk, and grit in their houses. Fifteen minutes a day is all the time spent on them. They grow lustily, and in the autumn may be turned off into cash—almost net cash, for they live on the grain that would otherwise be wasted, and thrive on grasshoppers and bugs.

Outwitting the Hessian Fly



Courtesy Soil Improvement Committee

FOR avoiding the attacks of the Hessian fly, late seeding has been found to be the most successful method. But in late seeding there is danger of not getting a stand that will carry well over the winter, and decreased yields result. Choosing the lesser of two evils, however, seems to be the logical thing in this case; for, while late seeding may give smaller yields, early-seeded wheat may succumb to the attacks of the fly and be destroyed entirely.

And your late-seeded wheat can be given a boost that will carry it well through the winter, by careful preparation of the seed bed. The fertilizer used should carry a high percentage of phosphorus, as that element is lacking in most soils that have been farmed long. A good complete commercial fertilizer carrying 10 or 12 per cent phosphoric acid is fine, or in many cases acid phosphate or basic slag alone would pay best of all.

Thus you can still get almost maximum yields, and by late planting keep out the Hessian fly. Many millions of bushels of wheat can be saved this next year by a little more careful attention to seeding and fertilization.

Even a Short Vacation

[CONTINUED FROM PAGE 16]

accompany you are compatible. I would rather tinker with a balky engine or patch a tube in the broiling sun than put up with a family that is never satisfied, always in a hurry, and who spend half of the time predicting calamity.

The car ought to be in good mechanical condition, a couple of spare tires and tubes should be carried, but if this is not convenient take an extra tube and a couple of blow-out patches, and buy other supplies as needed. Drive carefully and never get in a hurry. If you can take but three days off, plan to stay pretty close to home, so you will not have to rush back; and if you hire a man to look after your stuff for a couple of weeks, make provision that he will stay with the job if you don't get back on on schedule. When I take a vacation I don't want to worry.

A pair of overalls, over a reasonably decent pair of trousers, and an old coat are as good an outfit as the male members of the party can find, and the women ought to dress with as few frills as possible. You are going on a vacation where you can rest and live and have a good time, and not to create an impression or stand parade. The more simple it is the better you will like it, and the more returns it will pay.

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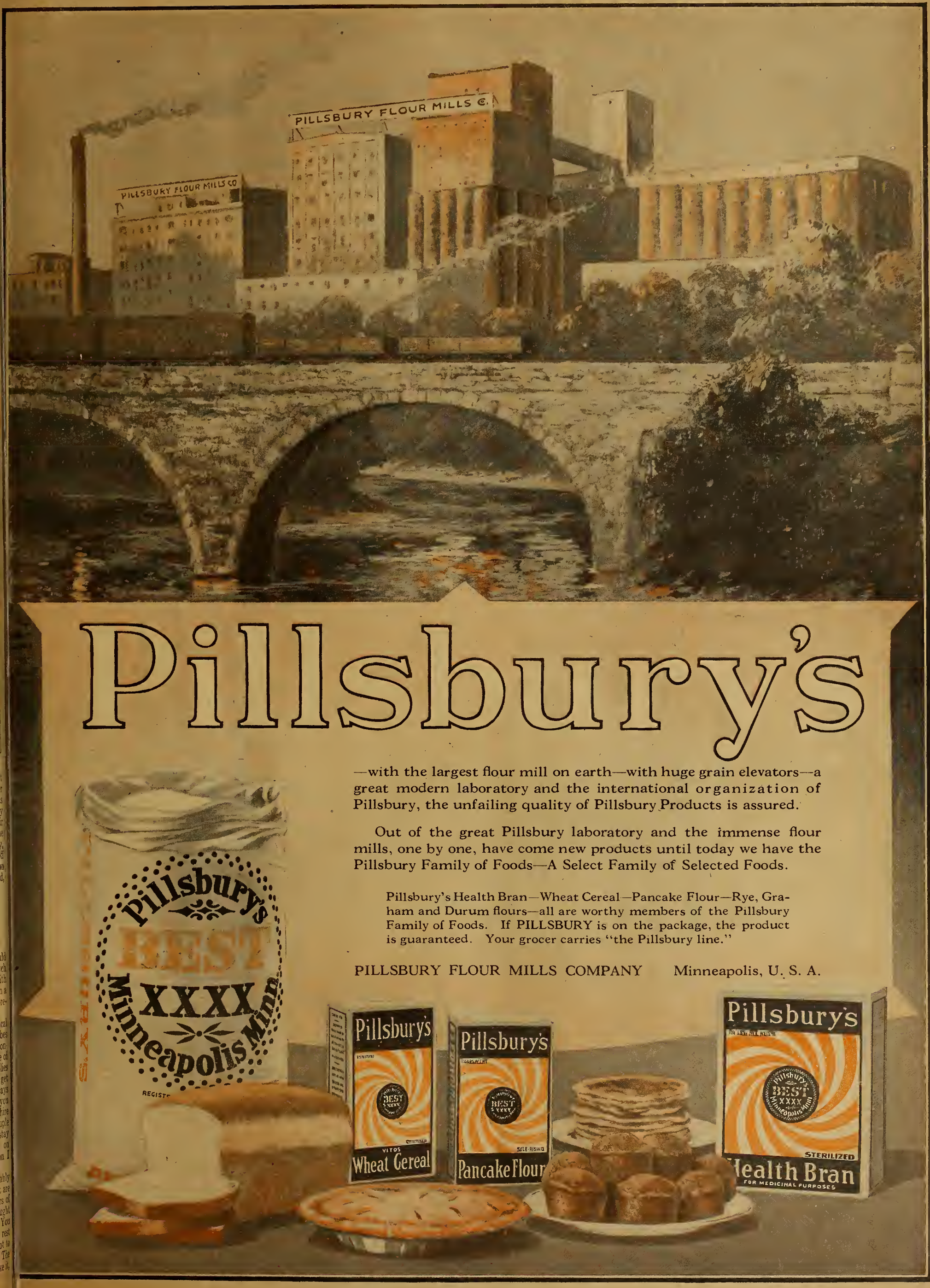
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It Paid Us to Haul With a Truck

By J. L. Justice (Indiana)

ANY practical way that a farmer can save both time and money represents an economy. It has been pointed out that the adoption of the motor truck or the formation of a motor express would be an economy to a large number of farmers. Here is a concrete illustration:

During a period of warm weather we had left from a herd six head of fat hogs which we desired to send to the local packing house. The packing plant is about four miles from here, and to send the hogs in a wagon would require the better part of a morning for a team and hand. So we called in a motor truck, the charge for the trip being $1.50.

On our home scales, before leaving, the six head weighed 1,244 pounds. At the packing plant they weighed 1,230 pounds, the shrinkage on the trip being 14 pounds. The time between the farm and packing plant was about twenty minutes.

If we had taken these hogs in a wagon the loss from shrinkage, as past experience has proved many times, would have been between four and six pounds a head. Taking four pounds as a fair basis, the total loss would have been 24 pounds. The truck therefore saved the difference between 24 and 14 pounds, or 10 pounds. The hogs brought 17¼ cents a pound, so the 10 pounds represented a saving of $1.72, and the truck man charged $1.50 for hauling. We made 22 cents by hiring the truck, and the work was all over in less than an hour. On looking at it in a comparative way with the wagon and truck:



WAGON CHARGES

Team, ¼ day at $3	$0.75
Driver's time, ¼ day	.75
24 lbs. shrinkage at $17.25 cwt.	4.14
Total charge	$5.64

TRUCK CHARGES

Truck charge	$1.50
14 lbs. shrinkage at $17.25 cwt.	2.41
	$3.91

Does a Motor Run Sweeter at Night?

DOES it seem to you that your motor runs better at night? It is the impression of a great many motorists that it does. There seems to be less missing, and the car glides along with the pleasant, contented sound that makes you feel that everything is working in perfect unison. It is even a pleasure to have the muffler cut out so as to hear the even torque of all the cylinders more plainly.

Experts say that there is more in this view than most people realize, but they claim that one of the chief reasons that the car runs better is that you do more careful driving. During the daytime there is a tendency to speed, and sharp corners, chuck holes, and an overheated engine are unnoticed, due to the interest in things along the way.

At night there is the constant thought that some obstacle or sharp turn may be lurking ahead. Unconsciously you drive more slowly.

The motor has a language of its own that is very easy to understand if one will but give it his ear. Here are some of the things it will be saying to you:

"Give me food and drink in moderation; don't choke me. Give me a good digestion, so I can thoroughly digest my food, which is the gas mixture, and thus show my best power.

"Do not give me too rich mixtures of food and a weak spark, for that leads to waste, and soon I will be all choked up with carbon and have a bad liver and heart, and I will pant when going up the hills. Better give me less gas, more air, and a big hot spark with which to consume it. In this way my cylinders will keep clean and I won't be afraid of the hills. Then I will purr."

G. W. M.

Making a Motor Truck Pay

By Charles Olive (Minnesota)

JOHN MASON of Renville County, Minnesota, believes in being up-to-date. As to automotive machines, he has two pleasure cars, a tractor, and a truck. He says a motor truck would well pay on any average farm. He has had his truck for three years, and has always found it as useful as any other farm implement. The machine is still good, though it has seen some hard service.

When I met Mr. Mason the other day he said: "I was at first doubtful whether a truck would be profitable on a 160-acre farm. But I have much produce to haul to market every fall, and, as it is 10 miles to town, I cannot possibly make more than two trips a day with horses. I figured that I could do the work much quicker with a motor truck, and thus save a lot of valuable time. So, wise or unwise, I decided to buy a truck.

"I purchased one with a ton capacity that same fall, and I have been in love with the gas wagon ever since. With it I am able to do alone as much hauling as three men with three teams can do, and often more. I use the truck for hauling all my grain to market, and also my cream, hogs, and cattle. I have frequently taken over 50 bushels of grain to the load, and made six trips to town in a day, even when the roads have not been in best condition. And I do not have to sit on the load and freeze for hours when it is cold. Indeed, my motor truck is one of the handiest machines on the farm, and has paid for itself many times over. Hauling farm products 10 miles to market in a lumber wagon is, I think, an old-fashioned method.

"The truck has saved my horses, and has also saved much time in just hauling things to market. But I have put the machine to numerous other uses. Last fall my well ran dry, and I was obliged to haul water for my stock from a neighboring farm. One of my smaller boys could do the work with the help of the truck. I was very busy, and if it hadn't been for the truck I believe I would have been stuck.

"For a 160-acre farm I think that a one-ton truck is large enough. But lots of farmers are now buying the heavier trucks. On the big grain farms, 3-, 3½-, and 5-ton trucks are used for hauling grain to market. On account of its weight, grain cannot be hauled quickly with teams."

Why They Top the Market

[CONTINUED FROM PAGE 15]

the heavy hog to those more on the butcher type, and the average weight now runs from 225 to 250 pounds. Since the Allies started buying pork and products of us, the good old-fashioned heavy hog has been in more demand.

The big type hog is fine for lard, but the domestic consumption of lard has decreased very materially in the last few years. This is partially due to the increased use of vegetable oils and fats, and to the manufactured products which tend to decrease the use of the hog product.

NOTE: This is the second of a series of three articles on stock feeding and marketing, to show the farmer what and how to produce stock for which the packer will pay him good money. The first article, on beef, appeared in the August issue. The last article, on sheep, will appear in the October issue. If you missed the August issue, and want it, send this note with your name and address to us at 381 Fourth Avenue, New York City, and we will mail it to you.

THE EDITOR.

That Basket of Apples Under the Seat

By George Welmar Brown (Ohio)

HAVE you ever noticed when you drive into town with a load of apples to peddle about, or dispose of to the groceries, what a hungry look that man standing upon the street near-by gives you as you pull up to the curb, and especially if you have extra fine fruits displayed in nice crates? We did, and we took a valuable lesson from that hungry look. The whole world is hungry for good apples to eat, and all the time. We used to feel sorry when we shied glances at him with the hungry look, but our apples were all weighed up in measures ready to deliver, and we must not start in handing out, or we would run short. We caught a trick one day when packing in our orchard for the market. Quite a few specimens were always found with little defects, overripe or bruised just a little. These apples were more than we could use up at home, and often went to waste. Next day when we took our load of apples to town, a half-bushel basket of these specimens, mellowed for ready eating, went under the seat, and everywhere we met that hungry look with a ripe apple.

And it worked, better than we had suspected, for the next time we went to town with apples that hungry look met us with an order for some of our apples. Then it went still further. The grocers where we delivered apples found out, and we did not tell them either, that we were handing out ripe samples. It increased their trade, and thereby increased the demand for more of our apples. Now we never go to market in apple time without a good, generous basket of ripe samples under our seat, and they bring us as much money in an advertising way as our crop does in the market.

How I Use My Bank

By Earl Rogers (Ohio)

I HAVE long believed that our telephones could save us more time and travel than they do. Right now I am thinking about doing the farmer's banking by telephone. I am not so very much different than most farmers, and I live six miles from my bank. There are times when I want something done fairly quick and which formerly meant a trip to town.

Now I have found that practically all my banking business may be done without going to the bank at all. When I want to deposit checks on my checking account I just make a list of them, on the slips that the bank has on the public desks at all times, and mail them to the cashier. I know him personally, and so I address the letter in his name, and no one else gets at it. The bank gives me a pad of depositing slips, so that I have them out here all the time. Then in a few days the receipt from the bank comes out, and the business is done.

Sometimes I want to borrow a little money for an emergency. I formerly made a trip in to the bank when I wanted money, as I felt that it was something to be quiet about—in fact, almost ashamed of. Now I do not see it that way, and I call the cashier on the phone and tell him how much I need and for how long. He mails me a note, which I sign and return, and the job is done. Then the time comes to pay the note. I send a check made out to the bank, with interest added, and in a few days I get the note back marked paid, and the business is over with.

Now I wonder if you think this is risky. Perhaps it is. Most of the business we do is risky in some way or another, at some time or another. The banker I deal with is a home man whose interests are here. A matter of a few dollars would not make him run away. If he embezzled a half million, then he might be expected to run; but what I send in wouldn't be worth the car fare on a very long run.

I find that the banks rather like this sort of business, as it distributes their work better than when people come to the window in bunches. When there is no one at the window the mail business can be taken care of.

There are some who advocate farmers' borrowing money of their banks, whether they need it or not, just to get acquainted with the bank's methods of doing business and to establish a line of credit. One can establish credit that might be very convenient some time when there is a pinch. I don't know whether I would do this, if I didn't need it, or not, though I believe the idea is worth considering.

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Learn the Facts

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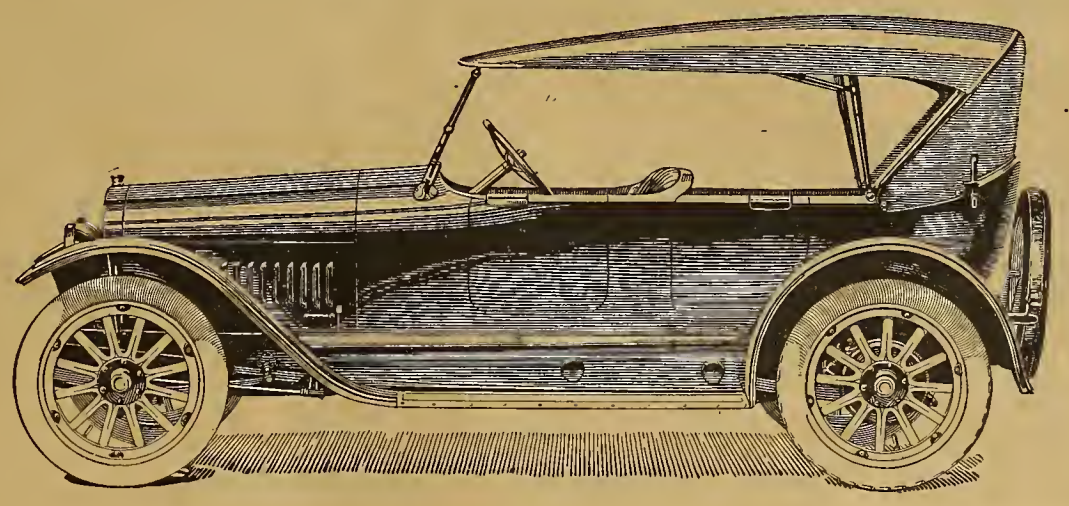
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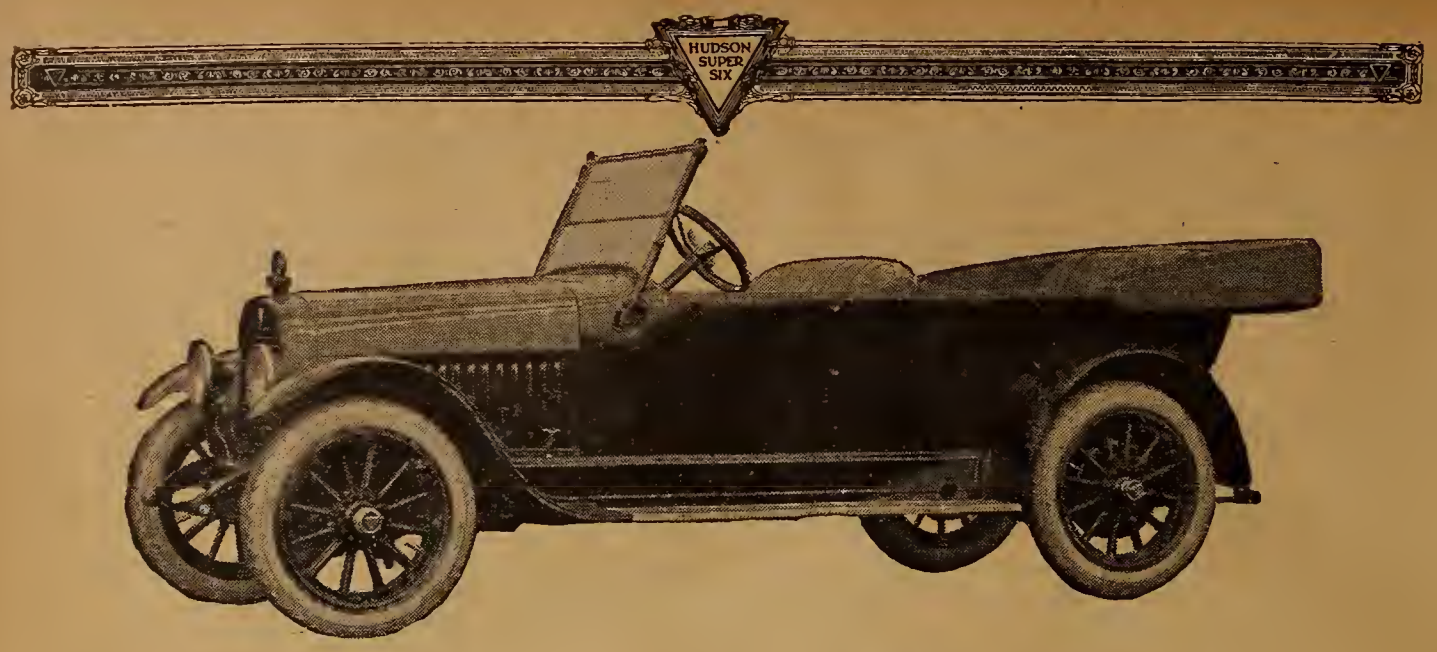
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Everyone knows Hudson Super-Six history. It is written in the official records of some of the greatest endurance and speed tests known. It is told in nearly every locality by those who know how performance reveals quality.

But its greatest fame lies in the appreciation that thousands of owners hold for it.

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Let the reader review the past four years of motor history. The Super-Six was a distinct step ahead in motor designing. It added 72% to power without increased weight or complications.

Its principle was new. Vibration had been minimized. Performance had been increased.

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Each Year Marked Some Improvement

New Hudson models are not mere changes in body design. Such attractiveness is not overlooked. The main effort has been to increase endurance, to free it from the faults common to all cars.

Easier starting, more reliability of performance, freedom from mechanical attention, a safer, more comfortable and more economical car has been the aim.

Each added quality has been proved in a thousand ways. The speedway, road racing, mountain climbing, trans-continental touring at express speed, did their part. Spectacular records were established, but long after details of the world's fastest mile for a stock chassis, or the double run from San Francisco to New York and return, had been forgotten by the public, Hudson engineers continued to profit by the lessons learned in those tests. Subsequent models showed the result.

Such a car would have been impossible without that experience. We did not enter racing to win prizes but to learn how to build a better car.

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Sales demand, though, has always been ahead of the supply. That shows how motordom regards the Super-Six.

When will you make it your choice?

(1086) **Hudson Motor Car Company** **Detroit, Michigan**

The Hallmarks of a Greenhorn Mechanic

By P. T. Hines (North Carolina)

EVERYWHERE you see the hallmarks of the greenhorn mechanic—that fellow who knows little about machinery but thinks he knows it all.

He is the man who uses the wrong tool on every job; who is always able to tear down but seldom able to put together; who rushes in where really good mechanics fear to tread; who is always able to give advice on any mechanical subject.

In short, he is the man who makes half the wheels of repairing machinery go round, because when he gets through "fixing" a machine real mechanics have a job.

You can always tell when he has been near a machine.

Nuts will have been loosened and tightened by the use of hammer and cold chisel.

Cotter pins will have been taken out and not replaced.

All lock washers will have been scattered to the winds.

Threads on bolts and nuts will have been battered and stripped.

Every part about the machine will be loose unless it has simply stayed tight of its own accord.

Gears will be chewed up until they are almost unrecognizable.

Bearings will have cried in vain for grease and adjustment.

Parts will be missing, paint scratched, and the whole machine dirty and unkempt.

The services of such a man are dear at any price—are dear even if they cost nothing.

Do not be a greenhorn mechanic. Be no mechanic at all rather than this.

And do not hire one!

A Motorcycle Pointer

By W. E. Curley (Ohio)

DO NOT neglect the rim of your motorcycle. If you happen to lose a spoke or two from a wheel (and there are few of us who are so fortunate as to escape the loss of spokes in the course of a year) do not think that a couple of spokes more or less make no difference to the wheel. If such were the case the manufacturer would have left them out in the first place.

Replace broken spokes as soon as possible, if you wish to keep your rim straight and true. Just as soon as a spoke is broken the rim will have a tendency to pull sidewise at the point where the spoke was attached.

The same thing applies to loose spokes. It is surprising how quickly the spokes will loosen up, and the rim warp in consequence, if the wheels are not inspected and spokes tightened frequently.

After a rim has been warped for some time, due to unequal tension of spokes, it is practically impossible to straighten it by tightening the loose spokes. It seems to get a permanent warp, and a new rim is the only cure.

I do not convey the idea that it is dangerous to ride a motorcycle with loose or missing spokes, for a wheel with one third of its spokes missing—if not all in one place—will carry the rider with perfect safety. If you have an accident and rip out some spokes, do not hesitate to ride home, but if you wish to keep your wheels true replace the spokes as soon as possible.

An Easy Way to Balance a Ration

DID you ever sit down to balance a ration where there were two or three concentrates, in addition to silage and hay, to figure on? And did you ever get up in disgust because it was feeding time and you hadn't yet hit the right combination? If you have you will appreciate a device that has just been perfected which will do all of your ration-balancing for you, and in a tenth of the time it usually takes.

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GOOD JOBS OPEN BOOK FREE

Tractor Farming in the Canadian Northwest

By T. A. Clark (Saskatchewan, Can.)

THIS is too late to get into the contest, but your articles on farmers' problems are so interesting, especially on tractors, that I couldn't resist trying to help you, if possible.

I read where one of your correspondents says that he has used his tractor nine months and thought that after that much experience he couldn't be fooled. Just let me say here that although I have run engines for seven years I still get a fooling sometimes. Even after a person thinks he knows it all, he will learn something every day or so about his particular machine. "A man never gets too old to learn." The tractor I am using is a 12–25. Although I have had a small amount of trouble I never have had to call in an expert to straighten me out. In the two years using this model I have never been hung up at a critical time. As this is starting on the third season I can see where the manufacturers could improve on it to the farmer's advantage, even if they had to raise the price of the engine.

My main objection is the non-accesibility of connecting-rod bearings. Although a person can adjust them through hand holes about 3x8 inches, you have to do it all by feeling, and it is next to impossible to get the nuts tight, and extra hard to find holes in bolts for cotter pins. I think the holes should be larger, or the crank case made so a person could remove it without taking engine out of frame. I always take the engine out, so that I can see what I am doing and be sure of a good job.

Next of importance is roller bearings. Although the bearings have never bothered me, there would certainly be less friction if roller bearings were used every place possible instead of just on rear axle. There should be three roller bearings on jack shaft, and also in front wheels. The worm and segment should be enclosed from the dust, because in this dry Canadian country the edges of the worm and segment get worn down to an edge you could shave with.

I am going to buy another tractor in the next twelve months, and I will stick to the same make if they remedy some of these things; if not, I will look at some others that suit me and which have these advantages.

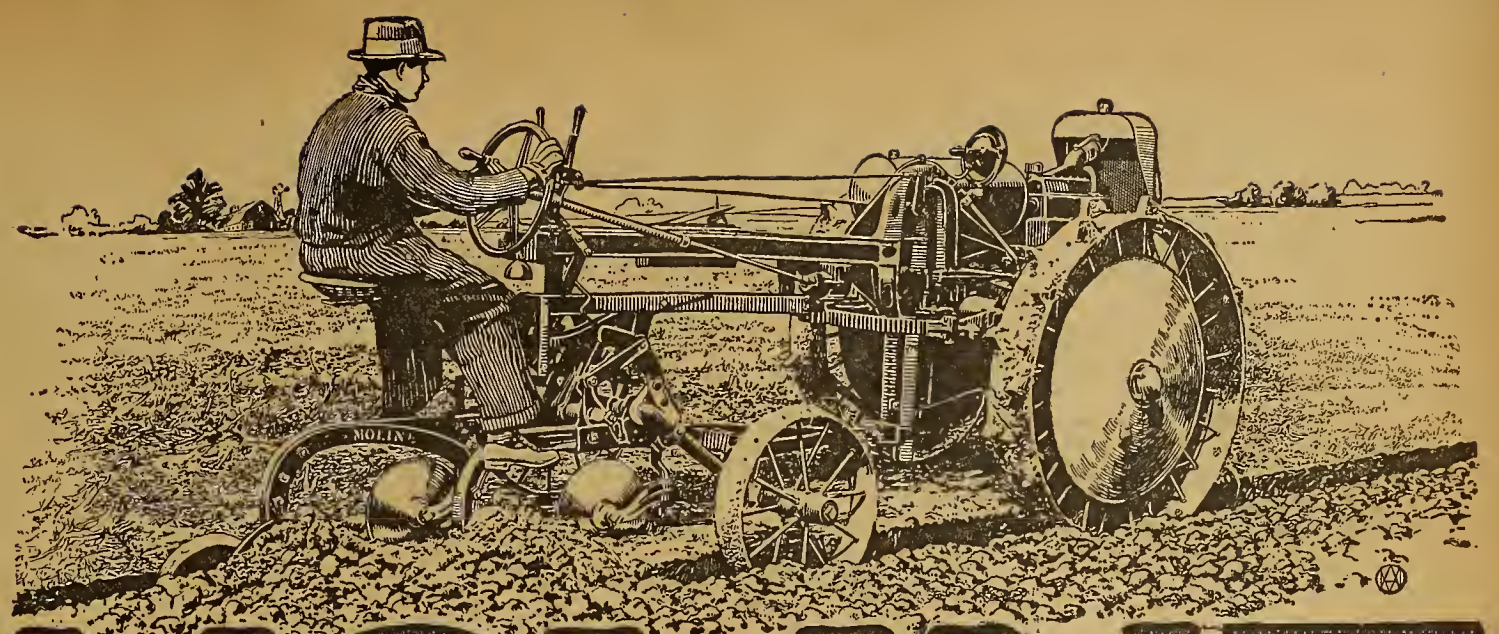
It might be of interest to you to know that kerosene is 25 cents per gallon; gasoline, 40 cents, and cylinder oil, $1.48. These prices are by the barrel. Of course, there are five American quarts in a Canadian gallon. Three 14-inch plows make almost an overload for a 12-horse-power engine traveling 2½ miles per hour in breaking virgin soil that is heavy. Three plows and harrow make a nice load in stubble. I have double-disked about 1,000 acres and plowed about 400 acres in the last two years, and have lots of work for it this year.

I have never seen a tractor that just suited me in every detail. Some are accessible, but leave gears exposed to the dust; others are almost perfect in both of those respects, but are poor kerosene burners or require too much water in the radiator to keep the system filled up. My present tractor uses only about a quart of water on a hot day, which I call perfection.

Then a few tractors still "monkey" with dry batteries, while others have weak frames. I believe practically all tractors are equipped with too narrow drive wheels. If you will notice the photographs in tractor catalogues of farmers using their tractors you will find that at least 75 per cent of the users have extensions on the wheels. Well, if extensions are necessary—and they surely are—why doesn't the manufacturer put them on in the first place? I have 6-inch extension rims, making my wheels 18 inches wide, which isn't any too wide. It packs the ground less, because it divides the weight (5,000 pounds) over more square inches and certainly helps in soft places in the field.

I have been asked a number of times which I thought would last the longest—a two or four cylinder engine. If they are given the same care, develop the same power, and hitched to the same load, I can't see why one wouldn't last as long as the other. For my part, if a tractor suited me exactly I wouldn't give the flip of a coin for the difference.

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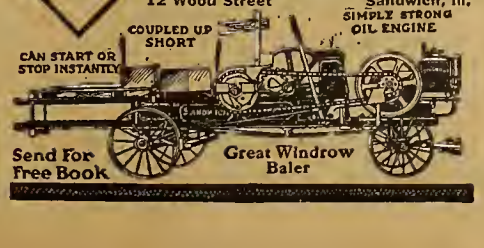
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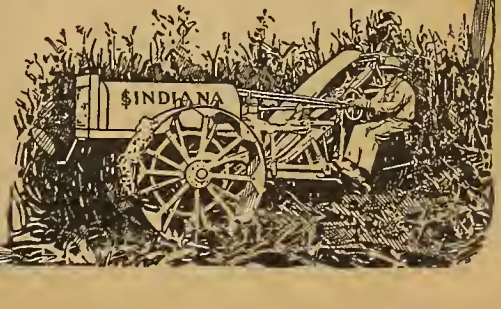
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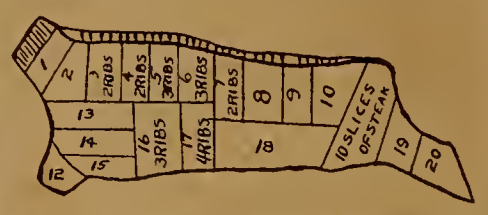
901 Dept. 108

How the Beef Ring Will Give You Better Meat

By Thomas J. Delohery (Illinois)

THE automobile, electric-light plant, telephone, and other things have done much to eliminate the inconveniences of farm life. Now comes the beef ring to help solve the meat problem. Fresh, home-killed beef on the farm is almost an impossibility unless there are enough people to eat a steer, or the farm is situated close to a city.

Twenty farmers around Marble Rock, Iowa, have fresh meat every week, and plenty of it, because they are members of a beef ring, which they organized several years ago.



L. N. Wilson of that city is a live-stock man who often yearned for a nice juicy steak. The meat he bought in town was not like the kind he made for market, and his mouth watered whenever he looked at the choice load of beeves he was feeding.

"Those steers would make some fine steaks," he said to his wife. "I wish I could have a steak or two from them instead of this tough beef we are getting in town."

A few days afterward he picked up a bulletin issued by one of the agricultural colleges, which told of a beef ring in operation in Canada. It showed how the farmers by this method were able to get fresh beef every week.

The next day he met one of his neighbors and told him of the plan. He told others, and finally called together twenty of his friends and proposed that they try the thing.

The chief obstacle was the lack of a slaughter house. So the men got together, and with old lumber, costing them $15, they built an abattoir. They contributed their labor and teams to the cause, and one farmer gave the use of a plot of ground on his farm, in return for which he gets the offal, which he feeds to his hogs.

One of the members, it developed, was a butcher before he took to farming, so he was given that job, and it was agreed that he should get $3 a head and the hide, heart, tallow, and tongue for his labor.

When the slaughter house was built the next question was supplying the beeves. It was decided that one steer every two weeks would be enough until the plan had been tried out. Within a short time, after its success was assured, it was raised to a bullock a week.

With two steers and $6 in cash each member has fresh beef for a family of five for a year. It costs them about $5 a week at this rate.

To make the slaughter house sanitary a cement floor was put in. Not all of the building is used for slaughtering. One room is used as a cooler. Each winter it is packed with ice. The icehouse is 16x24 feet, and the cooling room 8x10 feet. The ice is six feet deep on the three sides, and three feet on top, and is packed in sawdust so it will not melt too quickly. This sawdust packing is 18 inches thick under the roof and 12 inches around the sides, and the sides of the cooling-room are made of tin.

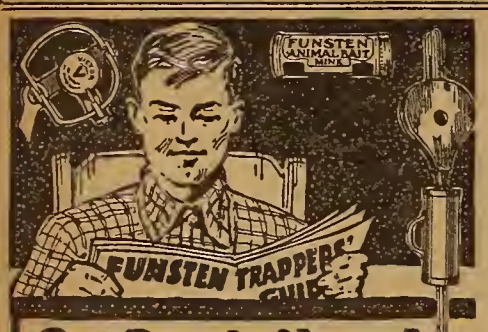
Meat will keep in this cooler two weeks without tainting. In order that every farmer will get as much meat as he supplies a chart is used. This has the name of each man, and it shows how much dressed beef he takes away, and his supply. If he takes away more than he gives, the surplus costs him $12 per 100 pounds; and he is paid in like proportion if he takes away less than he supplies.

In order that there will be an equality in division of the carcasses, the cuts are divided according to the accompanying drawing. As you will see, each cut is numbered, and is distributed according to the following table:

Roast	*Boiling Piece*	*Steak*
1	14	1
2	13	2
3	19	3
4	16	4
5	17	5
6	18	6
7	15	7
8	12	8
9	20	9
10	11	10

One man gets a boiling piece, steak, and roast each week, the position it comes from the carcass being decided on the slip on the side of the list. A rotation is worked so that the man who gets roast No. 1, boiling piece No. 14, and steak No. 1 this week will get roast No. 2, boiling piece No. 13, and steak No. 2 next week. In the course of twenty weeks, by this scheme, each man gets cuts from every part of the carcass.

A spirit of pride causes the members to supply only the best of their bullocks. Once a man unknowingly supplied a steer which was tubercular. When it was discovered the carcass was disposed of, and he furnished another animal in its place.



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To Keep Young Stock Healthy

By Dr. A. S. Alexander

BEWARE the old, bare-bitten grass pastures for young animals. Were every farmer to make it his invariable rule to keep calves off old grass during the first year of life, feeding them in roomy, clean, light, airy pens and shaded yards, provided with an abundance of pure drinking water, he would have better "luck."

Animals of one kind grazed year after year on permanent pasture inevitably taint or contaminate it with parasites peculiar to their kind. Lung worms are contracted by calves on such pasture, and there is no perfectly satisfactory remedy for this pest, which causes lack of thrift and sometimes fatal pneumonia. Pigs, too, become invested with lung worms which have a like ill effect. They take them in on old hog lots, pastures, orchards, and yards, or from surface water and dirty feeding troughs.

Pigs, like calves, should be kept off such contaminated places, and should be pastured only on new green rape, peas and oats, clover, alfalfa, or other forage crops. Prevention in both instances is all-important. Treatment is troublesome, expensive, and rarely successful. What has been said in respect to calves and pigs is equally true of lambs and foals. Stomach worms, tapeworms, nodular disease worms, and lung worms soon infest lambs grazing bare-bitten permanent sheep pasture.

Foals pasturing on old horse-tainted grass cannot escape contracting the deadly bloodworm, for which there is no specific cure.

Why I Am Going to Stick to Dairying

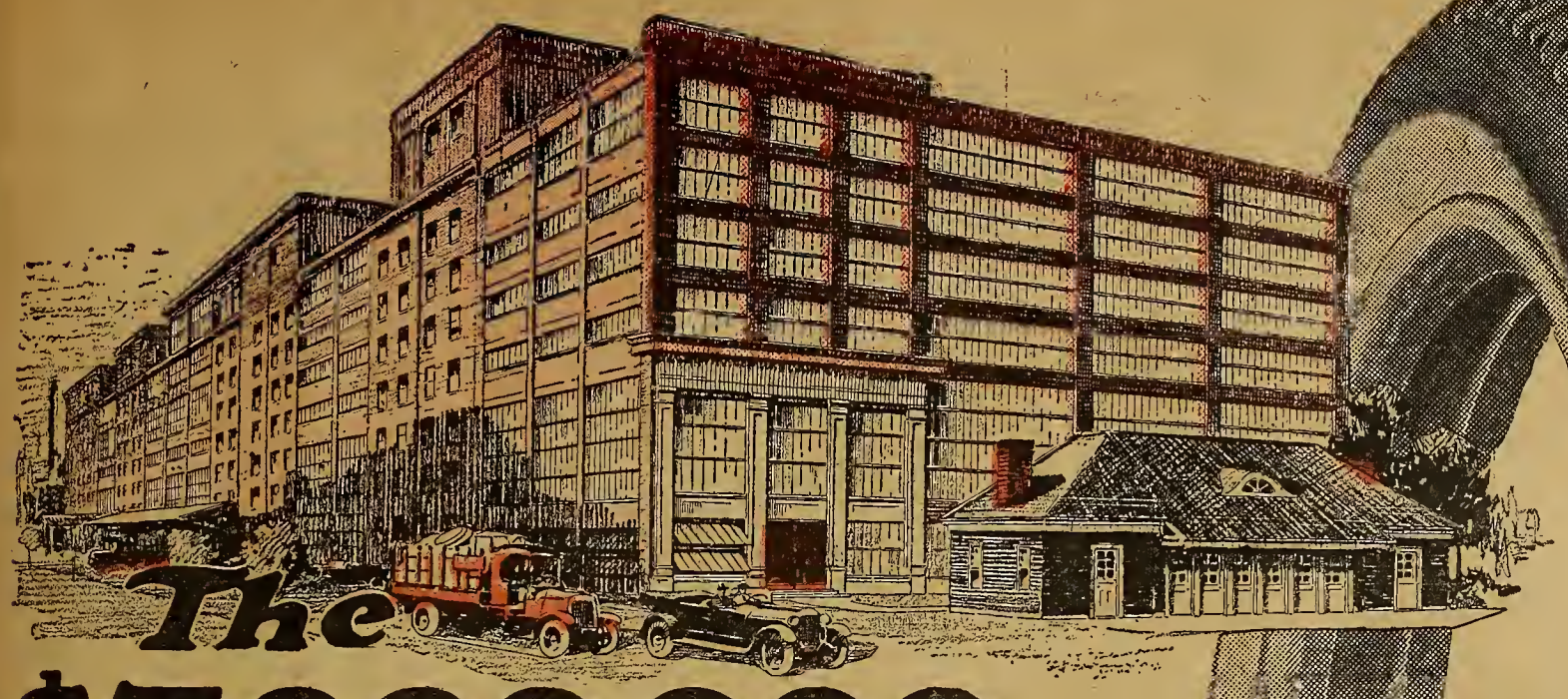
By E. L. Vincent (New York)

SOME farmers are turning from milk to beef. Instead of producing dairy products they are laying more stress upon breeding, growing, and selling cattle for meat.

Now is just the time when I am going to hold on to dairying as tight as I can. Why? There are those who tell us there is a surplus of milk. Right on top of that the story comes, backed up by good evidence, that there are many little folks, and old ones too, that never know what it is to have all the milk they ought to have. As long as that is so, I believe in producing all the milk I can.

So I am doing my level best to make my herd better. That has been my job for a good many years, and I have had the joy and the profit of seeing my milk test steadily rise, while the quantity produced is better to-day than ever. I have reached out in various directions to find better sires to head my herd. They have cost me something, but they have given me some good pure-breds and a number of fine grades.

But I do not expect to stop here. There is, somewhere, a better lot of cows than mine. As fast as I can, I shall work to graft some blood from those better cows into my herd. Because, don't you see, when any number of men sell their cows, or change from dairy-farming to beef-making, it is a good time for me to hold on and get ready for the high tide in milk-making that is sure to come my way.



The $7,000,000 3½ Inch Tire

—or it might be called the $73,000,000 tire, for it is possible only because of the entire resources of the Firestone Company.

BUT $7,000,000 is what has gone directly into this new, vast Firestone factory that is devoted exclusively to the making of this tire and the tubes to match. The main plant is now concentrating on Cords and big sizes.

16,000 TIRES and 20,000 tubes, all 3½-inch size, is the daily capacity of this new factory. This plant is years in advance in its mechanical efficiency. Into it has gone the thinking, planning, the spirit of service that distinguishes the entire Firestone organization. Its methods and machinery were developed by Firestone men.

FIRESTONE HAS STEPPED FAR AHEAD in engineering practice and you get the benefit. The labor saving equipment of this factory cuts costs on every operation from 10% to 30%.

FROM THE TIME special shipments of rubber and of fabric arrive at this plant, until the finished tire is loaded on the freight car, there is not a backward move.

AND THE MAN POWER of this plant is as far in advance of the ordinary as is the mechanical efficiency. The Firestone organization is the talk of men in big industry everywhere.

THE FACT THAT 90% of Firestone workers own stock in the Company is an index to their interest in their work. Their superior skill, their spirit of service, is stimulated by their financial interest in winning you as a customer.

AT EVERY TURN Firestone thinks and plans to give you the most for your money, knowing that this is the surest method of obtaining the greatest demand. Every move Firestone makes is toward this end—mileage at lowest cost.

NEVER HAS FIRESTONE, NOR ANY TIRE MAKER, offered car owners so much as they are offered now. It is the year of big value. Ask your dealer.

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30 x 3½

Non-Skid	Gray Tube
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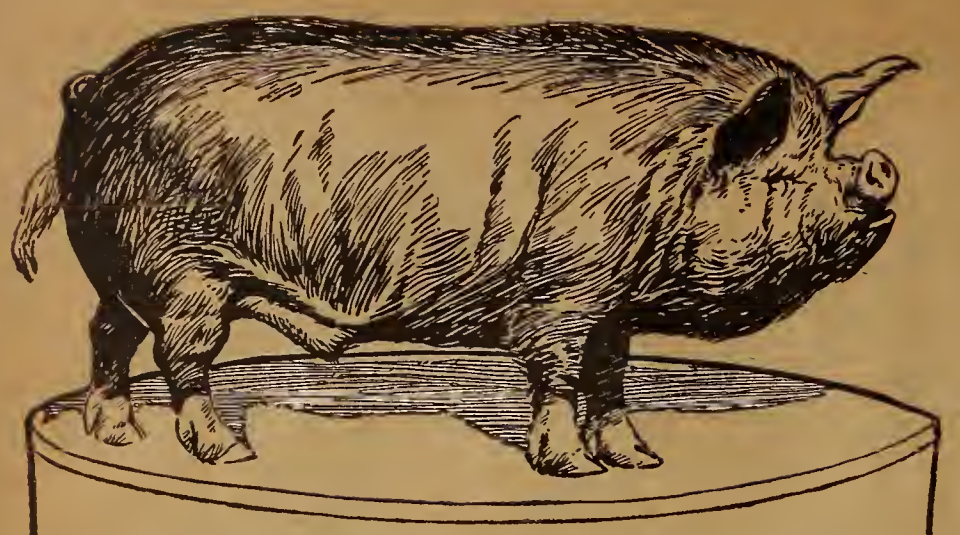
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6,000 Miles

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Get Rid of Worms

Always keep one compartment of your self-feeder supplied with Dr. Hess Stock Tonic. Make it half Tonic, half salt. Animal instinct will do the rest. Mr. Hog will not only help himself to this great worm destroyer, but—

He'll get a Tonic that will keep his appetite on edge and his digestion good. He'll get a laxative that will keep his bowels moving regularly. He'll get a Diuretic that will help his kidneys throw off the poisonous waste material.

Remember that worms are not a hog's only trouble—making a six-months market hog calls for a stuffing and cramming process with corn, or its equivalent. You are laying on fat faster than nature ever intended. Let your hog's system clog and your hog is in trouble; if there is any disease in the neighborhood, your hog gets it.

Dr. Hess Stock Tonic

Put it in the Self-Feeder

Here's the remedy—Always keep Dr. Hess Stock Tonic before your hogs in the self-feeder; or add it to the swill, or the drinking water—anyway, just so they get it.

Here are your results—You have a herd with good appetite—you have a herd free from worms—you have a healthy herd. Their systems are free from poison, free from fever, because the bowels and kidneys are active. They throw off and carry off the waste material.

Dr. Hess Stock Tonic is good alike for cattle, horses, hogs and sheep. It makes the ailing animals healthy, the whole herd thrifty. It expels worms. **Now, listen to this:** You buy Dr. Hess Stock Tonic according to the size of your herd—2 pounds for each average hog to start with. Add it to your self-feeder, or the swill, or the drinking water. You'll see the good results, or the dealer will refund your money. Always guaranteed.



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Except in the far West, South and Canada.
Smaller packages in proportion.

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THIS year of all years—with egg prices going the highest ever—get a big fall and winter egg-yield. Get your hens through molting—when they're all expense and no income—as fast as you can. Get your pullets to laying *early* and *regularly*. Yes, get *all* the profit you can from the high egg prices. Give *all* your poultry

Pratts Poultry Regulator

AMERICA'S original poultry tonic and conditioner, the standard for nearly fifty years. It builds health and strength *naturally*. It stops losses from the strain of molting. It puts and keeps hens in the condition where a good ration is all they need to lay the biggest lot of eggs you ever got. See if it doesn't. At *our* risk—



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Write for Pratts NEW Poultry Book--Free

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Philadelphia Chicago Toronto

Makers of Pratts Animal Regulator, Hog Tonic, Dip and Disinfectant, Veterinary Remedies.



The Illusion of Free Paint

By S. C. Burt (Illinois)

FORTUNATELY, the practice is not so prevalent as it was, but it is still more common than some of us wish—the covering of barns and other farm buildings with hideous signs proclaiming the virtues of wares offered for sale in near-by towns and cities. Undoubtedly, the man who permits such a desecration is thinking only of the advantage of having his buildings covered with paint at no cost to himself, and of the $10 bill which is slipped to him as an additional consideration for the privilege of committing such an outrage upon an innocent and unsuspecting countryside.

But, aside from the esthetic standpoint, this sort of paint is poor economy at best. Those who have been victimized in this way—and such it usually amounts to in the long run—assert that with the exception of that portion of the building bearing the advertisement the paint used is of the thinnest and poorest quality, scarcely good enough, as a rule, to weather more than a season or two. The sign, however, is put on to stay, and is of the "display" variety, which makes it almost impossible to blot it out without the use of several coats of paint. Thus, in the long run, there is no real saving.

A public-spirited farm woman once said: "The inside of my home belongs to me to do with as I wish, but my yard and home surroundings belong in a measure to the great public whose way takes it past my door." Which applies quite appropriately to the plastering of farm buildings with advertisements. Many cities have passed laws forbidding obnoxious signboards in certain residence districts. When will lovers of the countryside champion a bill to forbid turning our barns into billboards?



An example of roadside "beautification"

War Machines for Building Roads

THOUSANDS of tons of the machinery built for the War Department to help whip Germany is going to be turned over to American farmers to help build roads all over the United States, according to an announcement from Secretary of War Baker. This modern way of beating swords into plowshares originated with the Department of Agriculture.

Through the Department's Bureau of Public Roads each State will get its share of 20,000 army trucks, 1,500 caterpillar tractors, 400 road rollers, concrete mixers, graders, crushers, tracks, locomotives, steam shovels, and other equipment. We say, "Hurrah!" This will help a lot to hurry better roads connecting the city with the country. The great national highway, you know, is the road that leads from the market to your farm. S. J. L.

How I Equipped My Farm Office

By P. C. Grose (Ohio)

I KNOW a very successful farmer. He has been retired for many years now, but he did not quit farming until he had become the owner of several hundred acres of land, practically all of which he acquired as the result of hard work and good management.

I have been in his home often, and the most distinct impression of good management that I have had of this farmer is that of his spending his evenings at his desk in one corner of his living-room.

He seemed never to be better pleased than when he had some bulletins or reports, and was making sketches and calculations relative to the adoption of a new method or practice in his own farming operations.

Somehow I grew up with the desire to emulate the success of this farmer. As to the success I have had, much is yet to materialize; but I have already emulated his methods and proved their value.

Realizing that my means and requirements did not justify the creation of a special office structure, I followed the example of my predecessor and placed my desk in one corner of the living-room. There is now and then a time when I find the environment non-conducive to office requirements, but there are vastly more times when I am glad that my desk is where it is. In the evenings I can visit with the family, at times, and then do the daily desk work in the interim.

I purchased a fairly high-priced desk that makes an attractive article of furniture. Thus the desk adds to the appearance of the room instead of detracting from it. A comfortable desk chair seems quite as essential as the desk.

Another advantage in having the office headquarters at the house is that some member of the family will likely be there to give attention to a business caller.

Where possible, the telephone should be within reach of the desk.

I also have a typewriter. The first one I procured was a standard make; but, being of an old style and second-handed or rebuilt, it cost me only $20. Now I have an up-to-date machine, with all the modern conveniences, two-color ribbon, back spacer, tabulator, etc., which cost very near $100. The cheaper machines, however, are very serviceable, and I find that my old machine served me about as well as my new one.

By careful selection from a variety of designs, and having it made to order instead of selecting it from a dealer's stock, I secured a desk that encloses the typewriter within it when not in use.

I have a small file to guide me in my transactions. This I keep on my desk. Then I carry with me at all times a small note pad with leaves easily detachable. Thus, if while out in the field I happen to think of something that should be done two weeks ahead, I jot it down on the pad, and then that evening I make a memorandum of it to be filed under the future date. Each evening I refer to the file for all notes and memoranda that have accumulated for the following day, so as to be ready for them in the morning.

One very great advantage of the typewriter over the pen is that it enables one to keep a legible carbon copy of all business letters, which should be filed for reference along with all correspondence received. A typewritten letter on the farm's business letterhead speaks much for the modernness and efficiency of the owner.

To Save Money on Express Packages Try This Plan

THOUSANDS of dollars are lost annually by the small shipper through neglect to pack and tag express shipments properly. The big fellows do not lose much, because they take pains to have their merchandise well packed and carefully tagged or stenciled.

Much perishable food is wasted every year for the lack of proper crating, or because the tags rub off or because there are several uncanceled addresses on the crate. The express companies pay the claims, but a great deal of time and effort is expended in settling them, and in the end the shipper pays, through increased shipping charges.

These rules for better service, prepared by express experts, will save you time and money in getting your produce to market.

Always show your name and address as well as those of the person or firm, to whom you are sending your goods. As an additional precaution, it is well to enclose your name and address inside the shipment.

Place plain, legible marks directly on each shipment by use of crayon (not chalk), brush, or stencil. Always erase old marks of every description. In marking shipments of iced goods, place the marks on some protected part where it will not come in contact with other packages. Never rely on a single tag. Avoid tags if you can write the address on the package, but never be satisfied with less than two tags. J. A. B.

The Way I Keep My Yard Full of Song Birds

By L. Walter Sherman (Ohio)

FOR fifteen years I have been waging war against insects, and at the same time keeping my yard supplied with songsters. There is nothing so delightful as to wake up in the early morning and hear the song of the thrush or the cheerful chirp of the robin.

My idea has been so to encourage and protect our bird friends that the bugs have no chance at all. At the present time I can show you, within a stone's throw of our back porch, a robin's nest, a bluebird's nest, two chippy nests, one ground sparrow's nest, two colonies of martins, a yellow warbler's nest, a catbird's nest, and our chimney will soon be filled with swifts, though they haven't arrived on the scene as yet this year. In addition to all these, a wren's nest full of young birds met disaster day before yesterday. Probably they were the victims of a stray cat.

Can others obtain like results?

Yes, they can. I had as many birds when I lived in a small town in northern Ohio and on a truck farm in Oklahoma as I now have in the hills of southeastern Ohio on a fruit and truck farm.

How do I do it?

First, ceaseless war, the year round, against the English sparrow. I never let a chance pass to kill one or destroy their nests. This sparrow is a Hun on every occasion. The most efficient weapon against them is a good .22-caliber rifle. Don't use shot shells, as they scatter and are only effective at short range.

Many a time I have taken my rifle when the sparrows and martins were fighting, and with a well-timed shot have picked off the sparrow without the martin's becoming frightened. To shoot a sparrow now I have to shoot from cover, as my appearance in the open with a rifle is a signal for every sparrow to take to flight. Some may think it strange, but not another bird seems to pay any attention to me or the rifle.

It is within the area best protected by my rifle that the above-named birds have built their nests, and this is the best proof that they appreciate this protection. Does anyone know of a like area, not protected, that is better supplied with birds?

Second, after protecting the birds from their great enemy, the English sparrow, it will be necessary to supply nesting places. Trees, shrubs, vines, etc., are natural nesting places for most birds, and my yard is abundantly supplied with them. I do, however, furnish the martins and bluebirds with houses suitable to their tastes.

The best martin box I have is made of a small barrel the inside of which is divided into 16 compartments, with a hole opening into each. This is placed on top of a long pole, away from the buildings. Do not place it on a short pole or on top of a building, as the martins don't like it that way.

The best bluebird box is a short piece of hollow log about a foot in length. One end is cut off square, the other slanting. A hole is then bored into it from the side. Place this house on top of a fence post, toenailing the square end to the post, and covering the slanting end with a board. Leave the opening on the south side. This house will nearly always attract the bluebirds. It looks very much like a hollow post, which is one of their natural resting places.



Drawn by J. Hamilton Williams — By Courtesy of "Judge"

The farmer's wife, strong for economy, gives her spouse a powerful hint about his habit of leaving the farm machinery outside for months in all weathers.

How I Make My Farm Work Easier

[CONTINUED FROM PAGE 13]

o do, or I might say twice as often, but twice is easy, and have obtained better crops. I ry to give my farm a square deal, and I get a square deal back. If your clover doesn't catch, take what the farm gives you, plow he clover, and the next year you'll get it back. You can't cheat your farm. One fall turned under an excellent stand of clover; he people called me foolish for not cutting t for hay, but the next year I had a bumper rop of wheat when others had a poor tand.

The people in this community are beginning to see that it pays to give back o the farm the second crop of clover, and hope this article may prove of some bene- it to my fellow farmers. I have been a armer for thirty-five years, and am con- inced that my present system of farming s easier, better, and more profitable than t was before. *G. J. B., Michigan.*

NOTE: These are only a few of the splendid letters received telling of efficiency methods applied to farming. It was a hard job to decide which we liked best, but here they are, and you don't agree write and tell us why. Other letters will appear from time to time, and if you were late getting yours in, or if you were so rushed with work that you didn't write at all, do it now and we will pay for all letters that are used.

Your Stock Will Appreciate This

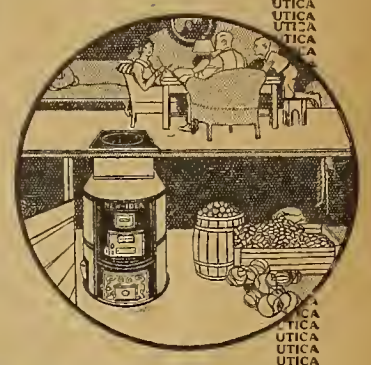
THE great annoyance and loss in flesh of your farm animals, due to flies during the hot months, can be eliminated by the liberal use of a good fly repellent. The following solution is recommended by the North Dakota Agricultural College:

Dissolve one cake of laundry soap in four gallons of soft water, and, while boiling hot, add one gallon of crude oil slowly, and stir vigorously for ten minutes. To this add four ounces napthalene, and shake for fifteen minutes, care being taken to keep away from the fire.

This solution is best applied by spraying, but can be put on with a moistened cloth. Care should be taken to apply to hair only, and not to rub the skin. Renew every day or two. W. A. S.

Live in Comfort for Years to Come

SAVE fuel, save work, increase the value of your property, live in comfort this winter and for years to come.



Will you devote one day *now* to secure these and many other benefits? That is all the time you need to install a

NEW-IDEA
Pipeless Furnace

"The One You've Heard So Much About"

There are no alterations to be made, no net-work of pipes to put up. Burn hard or soft coal, wood or gas and no more than you have needed for one stove. The New Idea will flood your whole house with fresh, clean, moist air as warm as you desire. It is the ideal heating—the kind physicians recommend.

One Fire Instead of Several

Instead of carrying coal and ashes for several stoves, making it difficult to keep the house clean, you will have only one fire to look after, and that one will be in the cellar. The perfect heating from the New Idea is due to its scientific and thorough construction. The frameless feed door construction alone puts the New Idea in a class by itself—no dust—no gas—no ashes!



A Real Investment

The New Idea is a real investment and its cost is little more than that of one good stove.

You'll want to know all about this wonderful heater so send for full information and name of dealer in your neighborhood.

Every New Idea Pipeless Furnace is sold under a *positive* and *absolutely binding* written *guarantee.* Write today.

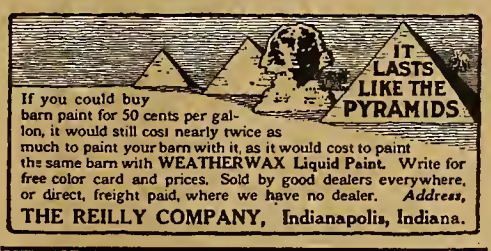
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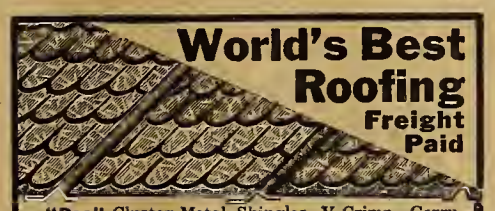
Excellent proposition to the right kind of agents

19-15



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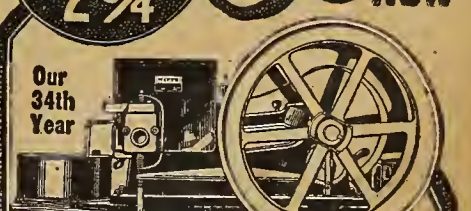
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We handle only about 12 per cent of the dressed meat of the United States. There are 302 national packers and 944 local ones competing with us.

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Care in Feeding Hogs

By A. M. Paterson (Kansas)

HOG feeders have to figure very ca fully to make a profit even w present prices. In the heavy corn-p ducing States like Illinois, Iowa, a Indiana the price of 100 pounds of h at the farm has generally been about t price of 12 bushels of corn. This give safe margin to work on.

Feeders in those States are accustom to figure that they can make 100 pounds pork from 10 bushels of corn. But duri the five-year period from 1910 to 1914 t price of 100 pounds of hogs would pay about 14 to 15 bushels of corn. Th must be less waste of feed now, and l loss from disease, if feeders are to f satisfied with the season's returns. T ing the average farm prices reported for t entire country, 100 pounds of hogs wo only pay for 10 bushels of corn, while the five-year period referred to they wo pay for 12 bushels.

These comparisons suggest that bulk of the pork now going to market l little profit in it. There is nothing to with shotes that have been on full f but push them right on to market wei and condition.

Stunts I Have Learned About Hog-Raising

By L. B. Kilmer (Indiana)

THERE is no mystery in the busines raising good hogs. I have found per cent of it to be merely common se In the corner of every hog house I hav sand bath, made by soaking a bed of s with crude oil. The hogs roll on this great enjoyment, oiling their hair destroying an occasional louse that may present.

The hogs get a little sulphate of iro their drinking water to prevent worms, have all the wood ashes, salt, and lime t want to eat.

I ring hogs by lassoing them around nose with a baling wire and holding th while the ring is inserted.

I have found by experience that surest method of preventing loss f cholera is by use of serum. The do method, which is supposed to give manent immunity, has caused the chol instead of preventing it, in so many c that it cannot be considered entirely to use.

The safest plan seems to be to do ev thing possible to keep the hogs healthy proper feeding and sanitation, and t if cholera breaks out, vaccinate im diately, with serum alone.

The success of this plan depends being able to get serum as soon as disease is discovered. About the only p tical way to do this is to follow the pla four counties in Illinois, which five y ago took definite steps to combat cholera by forming an association and ing a supply of serum to be kept in storage at some convenient point in t district.

Proper feeds, sanitary quarters, pure drinking water must be provi The successful hog raiser also knows th is essential to have the pigs well broke eating before they are removed from sow.

All that is necessary is to make a s opening in one corner of the pen, so the small pigs can enter an enclosure w the sows cannot follow. A mixture of ground feed and milk also may be pl in shallow troughs for the young anir They learn to eat and drink at an earl when this practice is followed. Then weaning time comes they miss their mot very little.

The common notion that bone or m must have age to have strength is brother to the idea that a pig must li half-rations for months to make him st enough to stand full ration.

As soon as the pigs have been put the fattening pens in the fall they sh be fed all that they will eat with a r for the shorter the fattening period larger the profits.

Lean, lank hogs and poor fences discourage the average man who goes hog-raising.

Keep the dog from chasing the He may tear their hams or chew their and is sure to lose you money.

If pigs get into the garden or gr crops, don't try to keep them ou punishing them with the dog, but sto cracks in the fence.

Solving the Father-and-Son Partnership Problem

By P. C. Grose (Ohio)

WHEN I returned from agricultural college I took charge of Father's farm. I was the only boy in the amily, and Father was at the age when he vished to be relieved of all active and stren- ous duties.

Consequently, the major part of the nanagement and operation fell on me.

So far as a capital and labor situation was oncerned, ours was just the same as that f the manufacturer and his employee. Ve were in the production game just as nuch as the manufacturer. The inherent riction that seems to exist between these vo elements of modern economic activity as in our relationship doubtless as much s in any. Yet in our case labor never uffered a lay-off, nor did capital ever suffer labor strike. How we managed it I all try to explain:

In the first place, Father must be credited ith having seen what it has taken a lot of anufacturers a long time to see, or at least admit—namely, that labor is quite as es- ntial an element to production as is capital, d just as much entitled to a share of the ofits of production. Some fathers, like me manufacturers, have apparently been ow to recognize this fact.

For example, I was ambitious and enter- ising and wanted to make some extra oney when I was a boy. As Father had a ir-sized family the shoe-repair bill was ry considerable. In view of these facts, conceived the idea of purchasing a bbling outfit for a few dollars and doing e repairing myself. Father might just well pay the money to me as to another, d at the same time it would permit me to ake a little extra money for myself. Father agreed to my proposal, and in a short time I had paid for the repair outfit and had made considerable money besides.

Hearing of what I had accomplished, another boy made the same proposition to his father. Instead of agreeing to it, how- ever, this farmer purchased an outfit him- self, and then made the boy, who was one of the oldest children of a large family, do the repairing without compensation. It is not remarkable that in a few years this particular "laborer" declared a "strike" and went off to the city for another job.

Father understood another point that many farmers overlook: he knew that the income from farming was always less to a single man than to a married man with a family, while in the city it is just the opposite. For instance, in the city the single man would pay rent possibly for only a single room, while the man with the family would require many. Also, the married man would have a heavier food and fuel bill. So, on the same income, the single man fares better in the city than the married man. But on the farm the factors of rent, food, and fuel are largely included in the total income. As the value of these are more to a man with a family than to a single man, the man with a family fares better on the farm than the single man. Knowing this fact, Father always sought to make my income as a single man on the farm equal to what I could make in the city.

Father did not donate me things or make it especially easy for me; he simply dealt with me on a fair and square basis. On my part, I helped to increase my share of the profit as the "labor" by increasing the profit that went to "capital."

hosphorus Will Increase Your Crop Yields

O SLOW with potash this fall, say the soil experts at the Ohio College of riculture. Fertilizers containing as high five per cent potash are offered by tilizer manufacturers, who claim that rt of this comes from the Alsace mines, ich are now operated by France. At the ces quoted, the cost per pound of potash ries from 20 cents, in the higher grades fertilizers, to 30 cents in the lower grades. Phosphoric acid when obtained in acid osphate costs approximately seven cents ound, or from one third to one fourth at the potash costs. Not only is phos- orus a cheaper fertilizing material, but also has been demonstrated to be more ective on most soils. The average soil t has been tilled for twenty years or re is hungry for potash, and responds ckly to liberal applications of acid osphate, basic slag, or raw rock phos- ate. Most clay soils contain sufficient ash to last many years. It is only the asional soil that is badly in need of assium, such as muck or other soils ose origin has been largely from vege- le matter.

On a average of over 100 tests through- Ohio, 175 pounds per acre of acid osphate has increased the yield of wheat en bushels an acre, and the increase in ld of clover following was more than ficient to cover the cost of the fertilizer. ash, added to the wheat with the osphate, produced an additional bushel wheat per acre, but was not sufficient to the cost of the potash.

The amount of commercial fertilizer d in Ohio last year, if equally divided, uld have added but 44 pounds to each e in cultivation. Ohio authorities ommend the use of at least 200 pounds acre of acid phosphate, or its equivalent, h year that a crop is produced. A few rs ago it was considered necessary only fertilize poor soils; now it is considered good investment on the very best of d. Without the phosphorus, which mercial fertilizers supply, clover and lfa yields decrease, and applications of mon barnyard manure are unable to p them up, due to the great loss through ching. In addition, a great deal of sphorus is lost from the land each year he bone of the animals, even if all the s are fed on the farm.

These recommendations apply to other tes as well as Ohio. Practically all soils that have been tilled for a number of years are in need of liberal applications of phosphorus to produce maximum crops. At the same time, until potash gets cheaper it will pay to go a little slow with it unless your soil is especially deficient in that element. O. E. S.

Which Way Are Your Roads Closed?

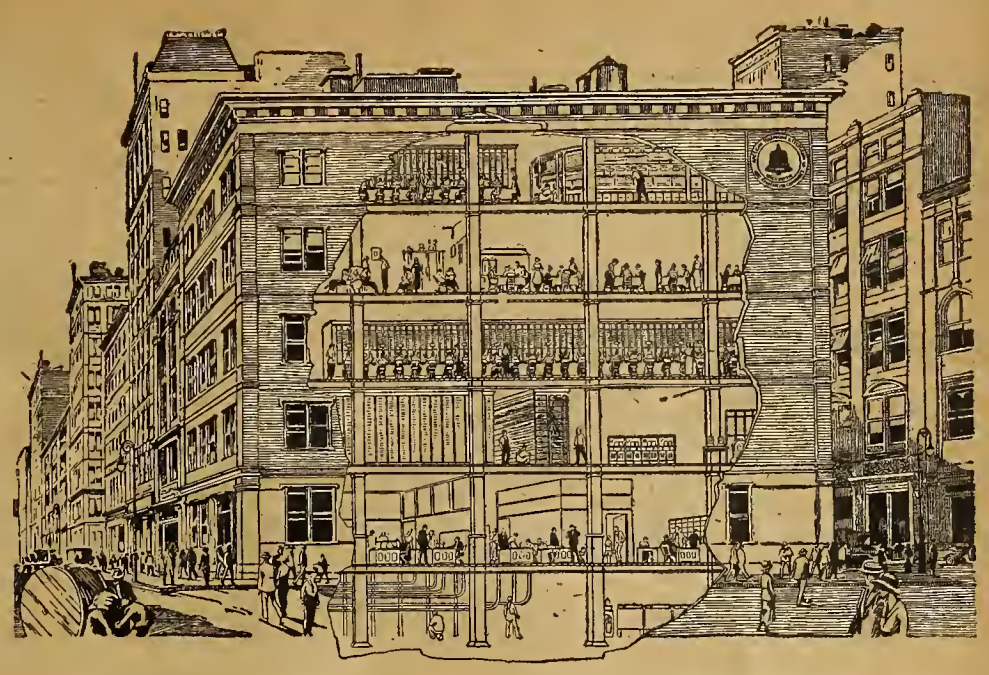
By S. C. Burt (Illinois)

THE closing of a public highway when repairs are being made carries with it a certain responsibility toward those who use the roads. As a rule, these responsibili- ties seem not to weigh very heavily upon



those who should discharge them. The public growls, but gets along as best it can, largely because it seems so useless to offer protest, and because it takes time to hunt out and register complaint with the proper authorities.

For one thing, a road should be really closed, as shown in the illustration, not partially so, if it is intended that no traffic whatever pass a certain point. There are always those who are ready to take a chance, and who will press on past a sign "Road closed," in hope of being able to pick their way around the obstruction. This results in interference and annoyance to the road gang, sometimes in accidents and upsets to those who venture upon the torn-up highway. When a road is closed, courtesy demands that it be closed at the nearest crossroad, and not half a mile further on, where perhaps the actual work of repair may be in progress. Almost everyone can recall the annoyance and delay occasioned by being obliged to re- trace one's course due to the neglect of the road boss properly to close the highway. Here again courtesy demands that a sign bearing intelligible directions be installed.



The Great Task of Construction

With the coming of peace the Bell System faced an enormous construction program. Conditions arising from war resulted in the wiping out of the reserve equipment normally maintained, and necessary to give prompt connection to new subscribers. The release of industry and accumulated growth of population now makes telephone demands almost overwhelming.

Telephone construction, including buildings, switchboards, conduits, cables and toll lines, must, from its inherent nature, be undertaken in large units. A metropolitan switchboard, with its tens of thousands of parts, may require from two to three years to construct and install.

Only great extension can meet the present excess burden of traffic and provide for future requirements. Extension which cares for immediate demand, only, is uneconomical and calls for continuous work of such a character as to be frequently detrimental to the service.

During the war the Bell System devoted all its margin to the needs of the Government. The great task of getting back to normal pre-war excellence of operation requires the reestablishment of an economic operating margin capable of taking care of a larger growth than has ever before confronted the Bell System.

Construction is being pushed to the limit of men and materials; while every effort is being made to provide the best, present service.

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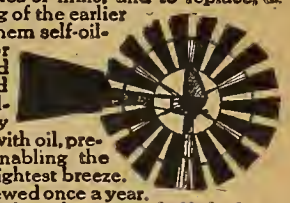
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LIVE BOYS CAN WIN THIS WATCH!

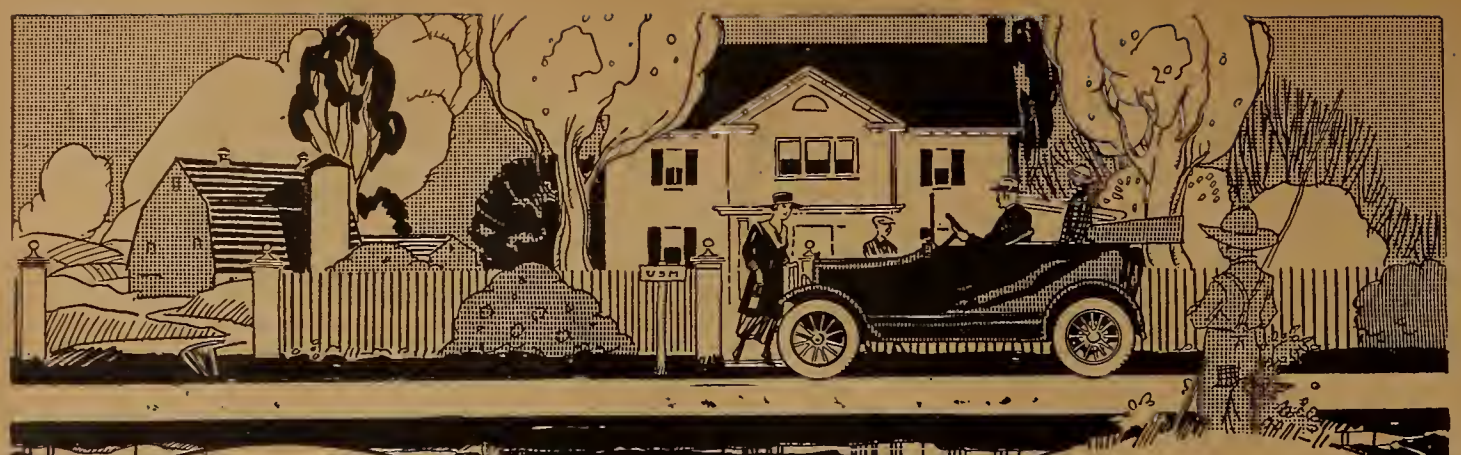


Stem wind, stem set. polished nickel case, keeps fine time.

All you need, boys, is a little pep. We'll send you this dandy watch for a few hours of your time. Go out among your friends, show them your copy of FARM AND FIRESIDE, get eight one-year subscriptions at 25c each, mail us the money you collect, and the watch is yours. Can you think of any easier way to earn a good timepiece? Lots of boys earned their watches in a day. So can you, if you try.

The Watch Club

Farm and Fireside **Springfield, Ohio**





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Before You Buy

It costs you only a postal card to get Galloway's prices on grain elevators, ensilage cutters, hay tools, pump engines, cream separators, manure spreaders and other farm implements. And it will be the best investment you ever made.

Galloway Sells Direct from Factory to Farm

The saving goes into your own pocket. Every article guaranteed to give satisfaction or money refunded and freight paid both ways. Choice of five selling plans. Closeby shipping points save you freight.

Write today and mention implement you are interested in.

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DO YOU WANT ONE OF THEM?

A number of our salesmen are regularly earning a salary of $65 a week. Without exception, when they started to work for us, they were in positions paying only mediocre salaries. But they weren't satisfied. They possessed an ambition to do something worth while. And they are doing it. We have several more open positions similar to theirs, with possibilities just as great.

THE KIND OF MEN WE WANT

If you can answer "yes" to these questions we want you, regardless of the kind of work you have done before, regardless of what your education is, regardless of whether you have ever had selling experience or not.

1. Are you a hard worker?
2. Are you honest and reliable?
3. Can you devote all of your time to the work?

We want you because we know that "yes" to these questions spells success.

ADVANTAGES OF THIS WORK

1. Healthful outdoor life.
2. Opportunity to learn salesmanship.
3. You are your own boss—absolutely independent, in business for yourself.
4. A good salary.
5. A permanent position.

If you ore interested, if you wont to climb out of a rut, or if you wont to better yourself, write for porticulors to-day ond tell us about yourself.

Manager Salaried Salesmen
Farm and Fireside Springfield, Ohio

Preventing Loss in Shipping Potatoes

I SEE that the double-headed, ventila barrel is the most satisfactory method shipping new potatoes in the opinion of Department of Agriculture after extens investigations at important shipping poi in the South and at Northern mar centers. Southern shippers lose mu every year through fungous diseases wh develop where the skin of the tubers been bruised in digging and shippi Although sacks are mostly used for sh ping, they are not as satisfactory as barr because they allow bruising, and do permit sufficient ventilation. Sacks c less than barrels, however, and if u should not contain more than 120 pour according to Farmers' Bulletin 10 published by the United States Depa ment of Agriculture.

Careful grading will increase the grow profits, and will insure a ready marl especially if a brand is used which dealer gets to know. He will pay more potatoes from a grower that he knows be reliable, because his potatoes will carefully graded and packed, and will contain bruised, cut, or diseased tubers

The majority of rotten potatoes caused by bruises which permit fung diseases to get a start. Careful hand will eliminate most of this. Contai should be strong, and where barrels used they should be placed on end in c instead of on the bilge, as there is breakage. Cloth-top panels do not tect as well as those having double he and slat or veneer barrels will not st rough handling. Well-built crates h been used successfully, but hampers h not proved to be satisfactory, bec they are usually not strong enough. W sacks are used they should be set upr in the car, one half of the bags lea against one side of the car and the o half against the other side.

Ventilated box cars or stock cars be safely used for shipping new potat and double-deck stock cars are b successfully used in some sections placing one solid layer of sacks or ba standing upright on each deck. If s cars are used, it is best to line the with heavy building paper to protect sun and weather. The net weight or measure should be placed on each tainer, and cars should be loaded accor to a definite plan which provides for tilation and prevents breakage. Atter to grading and shipping details will only save you money but also will cre favorable impression with dealers, soon learn that your product can be pended upon. S. N.

What I Learned as a B

[CONTINUED FROM PAGE 18]

"You seem very particular about you buy. Don't you think you ma mistake in not buying more of the ch kind to sell again in your country? importers buy them, and can und you." To which I had to answer:

"They do not suit me and I have f what does not suit me does not, as a suit our customers."

A few choice pure-bred animals, an thought of replacing the grades with breds as soon as it can be done, al seem to add interest to the work o youthful members of the family. Wer become an adviser to the youths o country on the farms, I would say:

"Study the animals, get interest their feeding, care, and breeding. your parents to get at least a pure sire, and then give them all the Watch and study the improvement. the shows and fairs—not to see the shows, but to study animal life by con son."

And to the parents I would give the advice, and to it would add:

"Study the likes and dislikes of children with the view of helping th develop along useful lines. Give them stock to work with; good books and pe cals along these lines. Encourage th study the laws that a wise Creator ga the beginning for the improvement creatures, when he turned them over t as a part of his great heritage."

The man or woman on the farm wh comes a good, thoughtful live-stock b gets a closer view of God's wise way his wonderful plans for a man's de ment on this earth than does any member of the human family. privileges are many if they are wise e to profit by their experience.

Two Mistakes We All Make

[CONTINUED FROM PAGE 8]

worse than useless. The kindergarten should get the child early in life. The next grade should continue the kindergarten spirit. The child should never again find *thought* separate from *action*. The child should be led step by step from one delightful task to another, learning nature study, learning of soils and plants and animals in good centralized rural schools. The boys should learn at the same time to work in wood and to forge iron, to graft trees, to lay bricks. The girls should learn nearly all that the boys learn, adding the art of making bread and the delights of needlework.

Other lands have made beginnings, taught us the way. In France it is said that there are 40,000 schools where the elements of agriculture are taught, schools with gardens attached to them.

Is America the most advanced of nations? Prove it, you who so affirm. Do we produce the most law-abiding, industrious, beauty-loving, kindly, reverent common people? Do you know that the despised Italian, the "dago," at home lives in a neatly whitewashed cottage over which are trained flowers?

Hungarian and Polish peasants dwell in neat, clean, gleaming white cottages with flowers and vines. They are clean, moral, industrious. Life in America causes them to degenerate, to become uncivil, rude, cold, selfish, grasping.

In Denmark the schoolmaster is the great man, the honored man of the village. They hold him in peculiar esteem and reverence. The schoolhouses are good. The schoolmaster takes his little flock with him on excursions now and then. The State furnishes transportation free for the school. They go to visit the seashore, to visit a forest, to visit a dairy or farm.

At their destination the master marshals them in orderly array, and they march along the highway or through the streets. During the march, the master explains to them the significance of this interesting thing or that. At night he marches them back to their car, and they go home again happy as children can well be, and wiser for their day's outing.

Now, to sum up: What is it that I suggest is worth doing for country people? First, to teach them to make their lands fertile. That the problem of fertility is not a difficult one is easily proved. It requires only energy, faith, and some money.

Next, to get after our schools and rebuild them from the foundation up. Put the good school in the center of a township, have it graded, put children first in the kindergarten with competent teachers, every grade afterward make nature study a prominent thing. Have school gardens, have plants and plant experimental work in every room, and have it going on all the time. Train teachers to do this work, and do it well.

Put workshops in connection with the schools. Train every hand to *do* at the same time that you train the brain to *think*, the tongue to *speak*.

And then, when school days are over? Foster a neighborhood spirit. Get people acquainted with each other. Build in each neighborhood a grange or clubhouse. Have times that are grave and times that are gay.

The country is good. There is absolutely no reason to fear that it will not come up, but then yet higher up. God made the country. God put men and women there. He put little children there. Can we not, after all, sum up in this thought:

Get yourself a field and dwell in a corner of that field. Walk hopefully over that field and ask of it: Old field, in what way did I err in my treatment of you? What is the yield, for which you hunger? You, field, are part of God's earth. You are apportioned unto me, as a very great privilege I am permitted to call you my own. Teach me my duty to you."

Take by the hand a little child, lead it out over that field and point out each separate flower, each plant, each bird, each animal. Lead that child, and see how in truth the child leads you. Foster that child's reverence, its love of things alive, its inquiring spirit. See that no poison of hate or prejudice creeps into the mind of the child. Teach it to use its hands, to do useful work in the world. Help that child to work, to think, to reason. Teach it to lift up its head, smile, and be gay. When you have done these simple little tasks, you will no longer be any need of a commission to ascertain what is wrong with country life.



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A QUART of milk and a quart of cream look much alike in the pail. But milk is milk, and cream is cream, and they don't sell for the same price.

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Big Crops in Northwest Texas on the New Line of the Santa Fe

The Federal Railroad Administration has authorized the completion of the new Shattuck Branch of the Santa Fe Railroad to take care of this year's big crops—wheat, oats and sorghums. This will open for immediate settlement and development a large block of my land in a wheat and stock-farming section of Ochiltree and Hansford Counties in Northwest Texas near Oklahoma State line, where the first crop has in a number of cases paid for the land, and where cattle and hogs can be raised at a low cost. Land is of a prairie character ready for the plow. **No stone, stumps, no brush to be cleared,** at attractive prices on easy terms. Climate healthful, rain falls during growing season. Write for free illustrated folder, giving experience and results settlers have secured in short time on small capital. T. C. Spearman, 988 Railway Exchange, Chicago, Ill.

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KITSELMAN BROS. DEPT. 271 MUNCIE, INDIANA

Our Letters to Each Other

This is where we take a few lines every month to talk things over, so if you've got anything on your mind, let's hear from you

MAYBE you fellows don't suffer from new didoes that your wives are constantly adding to the dining-room table, but, by gosh! it seems to us that there's a strange implement rung in on every meal at our home here lately.

Not that it makes any particular difference, for it will be done anyhow; but darned if it doesn't keep us worried. Take salt cellars, for instance. You wouldn't think there were many tricks to play on a common salt cellar, would you? And yet, when you get right down to it, there seems to be no end of stunts. Already we have had three different varieties—shaking, pinching, and grinding. The latest is the grinder. You turn a little crank and out rolls the salt. Makes you feel like an Italian organ man with a monkey.

But the salt cellar is an ancient institution, and far be it from us to malign it. Among the Greeks and Romans it occupied the place of honor at banquets, and among the wealthy, salt cellars were handed down from father to son.

During the latter part of the Middle Ages the salt cellar was the most conspicuous object on the table. It was always placed in the center of the long table at which the household gathered, my lord and lady, family, and guest being at one end, and the servants and retainers at the other, and in this way one's social position was at once apparent, the "gentle folk" sitting "above the salt" and the yoemanry "below the salt."

The cellars of the rich were of gold or silver; but, just as in all things else, salt cellars were made of common earthenware for common people, and at ordinary repasts the cellar was often a piece of bread hollowed out, and placed near each guest.

If our wife sees this we'll get one of the hollowed-out bread kind next, probably.

FARM AND FIRESIDE

The National Farm Magazine

George Martin, *Editor*

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Trell W. Yocum — Helen L. Crawford — Andrew S. Wing

Corresponding Editors

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J. F. Duggar, Alabama, *Southern Crops and Soils*
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Thomas J. Delohery, Illinois, *Stock Marketing*
F. F. Rockwell, New York, *Horticulture*
Victor S. Aubry, New Jersey, *Poultry*

You are invited to ask questions of any or all of these men in their respective fields. State your problem clearly and fully, enclosing a stamped self-addressed envelope for reply. Address each editor care of Farm and Fireside, 381 Fourth Avenue, New York.

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What? A Brutal Husband?

However, if you think that is trouble, look at this: Here's a good wife who says she and her husband are perfectly happy on their farm, except that she can't stand the brutal way he treats his stock.

"We are living," says she, "on a farm of 300 acres out here in the Southwest, and it could be the happiest place on earth were it not for my husband's horrid temper. He treats his animals so cruelly that I sometimes think I can't stand it any longer.

"You might think there was something worrying him, but there isn't. Outside of that one thing we are perfectly happy. Our little girl, eight years old, is a nervous wreck on account of her father's brutality. She watches him all the time he is around the cattle, and it breaks her heart to see the way he treats them.

"Of course, he works very hard, but we do everything we can to help him. We just bought the farm last year, and we worked hard to get it. I do my housework, and work in the fields too, and I know we could be successful and happy even with our small start if it wasn't for this one thing. What do you think of it?"

Jessie M.

That's a pretty stiff question to put up to another man, Jessie M., and we're not going to stick our fingers in the fire trying to answer it. But it does suggest an interesting question that some of you folks might answer confidentially. How many of you are troubled with grouchy husbands or ill-tempered wives? Don't answer if you are just troubled and haven't found a solution of the problem, but if any of you—men or women—have worked out a scheme to make a sour nature sweet, or an ill temper gracious, tell us the story in a letter of not more than 500 words and we will print some of the answers—keeping names in confidence, of course—and maybe your answer will help others.

Forty Years a Farmer

Well, we got around that rather gracefully, didn't we? We don't like to talk about disagreeable things, but sometimes it has to be done. And we turn now to our good friend and subscriber, Mr. J. P. Carver of Canton, Illinois, who has a word to say about quality stock, enclosing a sample of same in the form of a picture, which we reproduce.

"I am sending you," says he, "a picture of one of the main subjects from which any one can get a good start in farming. He's a full-blood Polled Angus, and can be registered.



One of J. P. Carver's favorites

"I have 40 head of cattle. I sell my calves off of grass in the fall and rough my stock cattle through the winter on straw and hay. I have farmed for forty years, am now sixty-one years old, and I own 240 acres of land. I have tried raising almost everything, but I find that cattle can be handled most profitably with very little trouble and expense, especially if it is *good* stock."

Right you are, Mr. Carver. Quality stock makes quality folks. Every particle of quality a man adds to any crop he raises, or anything he does, means just that much quality added to his property, his neighborhood, his township, his county, his State and his nation; and the wealth of the nation goes up just that much, and makes it just that much better and more comfortable a nation to live and have his being in. (And we'll bet you're not mean to your stock, either, J. P. C. Eh?)

What's Your Life Worth?

Speaking of quality stock, what about quality of human beings? What's a human being worth, anyhow? If you were going to sell yourself for cash at public auction on your farm, four miles west of the Plummer school, at 3 P.M. to-morrow afternoon, what would you consider a fair price for yourself?

That's a tough question, but there *is* an answer.

Down in Texas, the other day, the widow of a man who had been killed by a train sued the railroad for $15,000 damages. The attorney for the defense said that inasmuch as the man only carried $2,000 worth of insurance that was the value he placed on his own life, and so that was all he was worth. The court is said to have agreed with him, but if the court did the court was wrong.

Your value is not the value you place on yourself to yourself, but your value to others. Your value to the world depends upon what you do in the world—the amount and kind of service you render to the world. And you can't figure that in dollars and cents. In some cases a man wouldn't, as the saying is, be worth his salt. In other cases—George Washington, for instance, whose value to the cause of liberty couldn't be estimated in dollars if you added up millions until you went blind.

There is a cash value that can be placed on your material ability to produce support for those dependent on you.

From several decisions in various States it is estimated that at ten years of age a boy of the laboring class is worth on the average, $1,061.42; at fifteen, $4,263.46; at twenty-five, $5,488.03—from which time the decline is steady, a man of seventy, by some legal decisions, rating at only $17.13.

By the same practical method of computation one eye is worth $5,000; one leg, $15,000; two legs $25,000; one finger, $1,500; permanent disability, $25,000.

What is the Answer?

E. B. L., of a certain Middle Western State, asks an old, old question here, but one that has never been answered. It applies with equal force in city, village, and rural schools, and her brief statement of bald facts puts the matter before us from the personal viewpoint—which we, in our anxiety to "hold down expenses" for the school district, are too often prone to ignore, entirely forgetting that when we hold down expenses to the detriment of the happiness and prosperity of the teachers of our children we are holding down our own progress as a nation. And that is very false economy. Here is the letter:

"DEAR EDITOR: This is August, and next month I begin my eighteenth year as a teacher in a country school. I am the youngest of four daughters—all of us were farm youngsters, and I have given seventeen of the best years of my life to teaching the "three R's" to boys and girls who have attended our district school.

"When I started teaching I received $35 a month, plus the $2.50 allowed for janitor service (which I did myself). In the seventeen years of service I have given my home community, my salary has been raised until I now receive the magnificent honorarium of $50, plus the $2.50 for janitor service—which latter I still render.

"I will save your time and my own by not pouring out any of the bitterness which has accumulated during those seventeen years—not bitterness in regard to my work, for I love it, but bitterness for a school system which hardly pays a living wage. But I would like to know where the country school teacher will eventually get off.

"Of course, my work has its compensation in the knowledge that I have helped so many youngsters, but when I know of mechanics, uneducated and hardly fit to be called skilled, in a town 30 miles from here who are making nearly as much in one week as I do in a month, it naturally makes me wonder where the *material* compensation is for the country school teacher. Can you answer that, Mr. Editor?"

You and your kind, E. B. L., are in that very small and select class of human beings who work for love. Of course, you are forced to it; but the fact remains that you work. And in so doing you show yourself noble and self-sacrificing to a pecu[liar] degree. But that is small comfort to you when you have to scrimp and save at every turn to "keep up appearances;" when you have to deny yourself certain privat[e] necessities in order to provide certain outward and visible non-essentials that your children's parents "demand" of you. It is to the great shame of America's fathers and mothers that they allow this to be so. They are the real school board back of the official school board. It is from them that the money really comes, and with the same breath they praise you for your goodness to their children and denounce the heaviness of the taxes that are utilized to underpay you. They ought to be ashamed of themselves. We say so flatly, and we don't care who gets mad about it. Maybe if they get mad enough they'll wake up and do something decent for you. What do you think about it, you fathers and mothers? THE EDITOR.

We Bow to This Lady

This is a very humble reply to J. B. of Indiana, who objects to the printing of articles about "How to Save Money on $3,000 a Year," on the ground that his husband only makes a $1.25 a day.

"I have seen letters," says she, "telling how people saved money on $3,000 a year. But I would like to see a letter on how a man could live on $1.25 a day and save money.

"My husband works by the day, except for a little while in the summer, when he runs a straw baler. He made about $800 last year, and we bought $200 worth of war savings stamps and two $100 bonds and subscribed for three more to be paid for during this year.

"Most anyone could live on $3,000 a year."

Well, J. B., we certainly hand it to you on a silver platter. Making $800 and saving $400 of it is going some. Not many folks save half what they earn. We'll tell you a little secret—our wife and I are trying to do that, but, believe us, it's an awful pull. We know it *can* be done, but fatted calves can be killed while you talk about it, can there? We told a man the other day we were doing that, and he said we were just a plain, garden-variety liar.

But, J. B., there are a lot of folks in the world who think they can't save out of $3,000 a year. We know of a case not long ago when the guardian of a rich man's child went into court and swore that she couldn't buy clothes for that young lady with the $12,000 a year he was allowed for that purpose, and asked that the allowance be raised to $15,000. And the request was granted. Of course, you and I and the rest of us know that was nonsense. But that's the way some folks are. It's the point of view that counts.

It isn't so much what you make as what you save that counts. Many a large fortune has been started by small savings and many a high-salaried man has died a pauper. But cheer up, J. B., when your time comes you will know what to do with your money, which is one thing some people never seem to learn.

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FARM & FIRESIDE

The National Farm Magazine

OCTOBER 1919 5¢ A COPY



Those Stupid Folks in Town—

See Page 5



Pillsbury's
FAMILY OF FOODS

Light, tender pancakes, with a delicious flavor—bran muffins, healthful and appetizing—wheat cereal that makes breakfast an event—bread, cakes and pastry, which are real food treats—all are made best with The Pillsbury Family of Foods—a select family of selected foods.

Pillsbury's Best Flour—Health Bran—Wheat Cereal—Pancake Flour—rye, durum and graham flours—all are fully guaranteed. With satisfaction, *to you,* positively assured let Pillsbury be your guiding word to the best in foods. Your grocer carries Pillsbury Products.

PILLSBURY FLOUR MILLS COMPANY
Minneapolis, U. S. A.





There Is a Delco-Light Man Near You

No matter where you live, there is a Delco-Light man within easy reach of you.

This means much more to you than mere convenience in the purchase of a Delco-Light plant.

These men are trained men—They KNOW electricity as applied to farm use.

They can advise you as to the size of plant you should have.

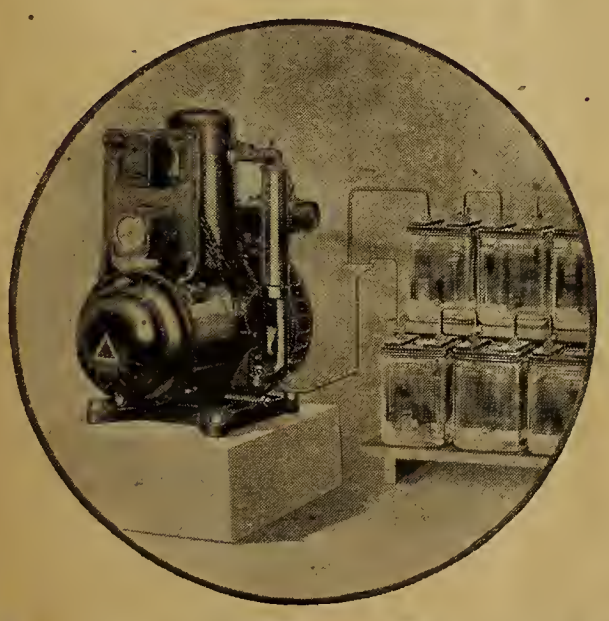
They can see that your house and barn are properly wired—

They can superintend the installation of the plant so that it will give you the most efficient and economical service.

They can tell you where and how to place your water system and what kind of a water system to have to meet your particular requirements—

They can give you intelligent advice as to the purchase and use of washing machine, churn, separator, milking machine and other appliances that you can operate with the electricity furnished by Delco Light.

And—After the plant is installed they are always near-by to advise with you and see that you get full hundred per cent satisfaction out of its operation—



Delco-Light is lightening labor, bettering living conditions and actually paying for itself in time and labor saved in more than 75000 farm homes.

DELCO-LIGHT

A complete electric light and power plant for farms and country homes, self-cranking—air-cooled—ball bearings—no belts—only one place to Oil—Thick Plates—Long Lived Battery—RUNS ON KEROSENE

The Domestic Engineering Company, Dayton, Ohio



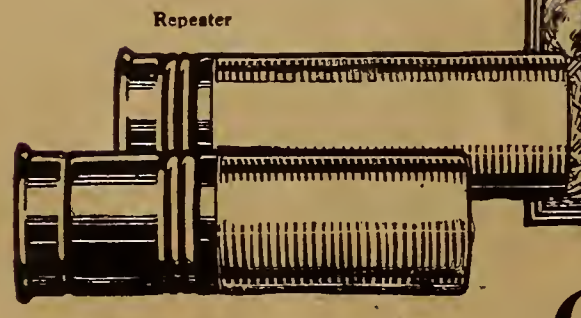
The hard-hitting Winchester pattern is evenly distributed. No game gets through and na game is mutilated







A patchy pattern often means a miss, many times a cripple, and sometimes badly mutilated game



GAME GETTERS

THE steady game-getting qualities of Winchester Loaded Shells have made them the favorite shells of experienced shooters.

Under all weather conditions they play true to form, shooting a strong, even spread of shot. The Winchester waterproofing process prevents swelling from dampness; special lubrication of the paper fibres prevents brittleness and splitting in dry weather.

The secret of the famous Winchester Shot Pattern is in the control of the gas blast from the exploding powder. This in turn depends upon the wadding in the shell.

The Winchester gas control system

The Winchester system of wadding and loading is the result of repeated experiments to determine the most effective control of the gas blast. The base wads of Winchester Shells are constructed to give what is known as progressive combustion to the powder charge. The ignition spreads to the sides, in all directions, as well as forward.

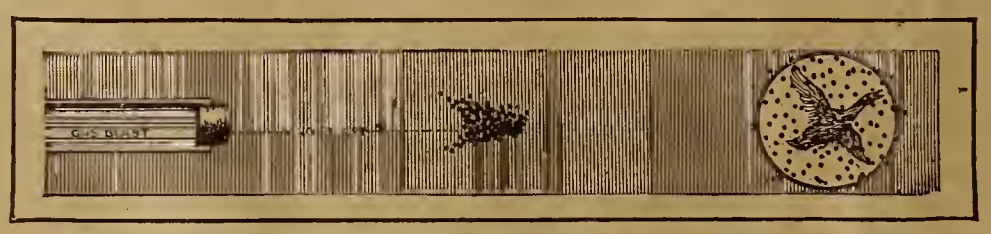
Under the heat and pressure of this progressive combustion, the tough, springy driving wad expands and fills the bore snugly, completely sealing in the gas behind. In being driven through the bore this wad offers just enough resistance to the gas blast to insure complete combustion of every grain of powder, so that the full energy of the whole powder charge is developed at the muzzle. Thus none of the shot charge leaves the gun until it is being driven by the maximum energy and velocity possible from the load.

At the muzzle, the expanded, snug-fitting driving wad is slightly checked by the muzzle choke or constriction, while the shot cluster travels on unbroken by gas blast or wadding, making the hard-hitting uniform pattern for which Winchester Shells are world famous.

Uniform shells. From primer to crimp, Winchester Shells are so balanced in construction as to insure the maximum pattern possible from any load. The broad fish-tail flash from the primer gives even and thorough ignition; the driving wads completely seal in the gas behind the shot; the stiffness of the crimp or turnover at the shell head is varied exactly according to different loads, great care being taken never to stiffen it to such a degree that it offers undue resistance to the powder explosion.

Clean hits and more of them

To insure more hits and cleaner hits in the field or at the traps, be sure your shells are Winchester Leader and Repeater for smokeless; Nublack and New Rival for black powder. Leading hardware and sporting goods dealers in every community carry Winchester arms and ammunition. They will be glad to assist you in determining the particular load best suited to your purpose. Upon request, we will send you, free of charge, our interesting booklet on Winchester Shotguns and Loaded Shells.



The Winchester system of wadding. The wadding expands evenly, sealing in the gas blast all the way to the muzzle, where the wadding is checked by the "choke" or constriction. The shot cluster travels on ahead unbroken. Actual test target 320 pellets out of 431 or 74% of the shot charge (1¼ oz. of 7½ chilled) inside a 30-inch circle at 40 yards.

Winchester Repeating Arms Co., Dept. 223, New Haven, Conn., U. S. A.

WINCHESTER

World Standard Guns and Ammunition

Volume 43
Number 10

FARM & FIRESIDE

The National Farm Magazine

October
1919

Those Stupid Folks in Town

By George S. Hall

"WHO gets the money?" is a question underlying almost every argument nowadays. Accusing fingers are pointed at everyone who has to do with the production or handling of food, the farmer, of course, gets his full share of the blame for the rising cost of all commodities. The city housewife has heard that many farmers actually own automobiles. What other proof do we need that farmers are becoming criminally rich? Then someone exclaims:

"Just think of it for a moment! A few years ago the farmer got 70 cents a bushel for his wheat, and now he gets more than $2. No wonder our bread comes high!"

Next comes the retailer's turn to be dealt a heavy body blow. A government clerk has been reading an article on modern city delivery systems.

"There are three times as many retailers as we need," he argues. "Little one-horse grocery stores are thicker than saloons used to be. Their delivery wagons block up the streets, chasing about with three tomatoes for Mrs. Smith, one-thirty-second of a peck of potatoes for Mrs. Jones, and one and one-fourth pounds of dog meat for Mrs. Abernathy. How long are we going to stand for this foolish and expensive system of delivery?"

But the wholesaler couldn't well be overlooked in such an argument. A bank teller who once spent a month on a farm where the hens laid strictly fresh eggs explained where the fine Italian hand of the wholesaler was shown.

"You see, hens have no more sense than to lay nearly all their eggs in the spring, when eggs are cheap. Now, in spring the packer's fancy lightly turns to cornering the egg supply. These eggs are held in cold storage till next winter, and then we will buy them at a nice little profit—to the packer."

At this point a contractor, who had been rather impatiently listening to the discussion, entered the arena.

"Have you recently tried to get any work done by hired labor? No? Well, when you do try it you will soon find what causes the high cost of everything. It's labor. The hod carrier and the coal heaver are paid higher wages than the college professor. And the more you pay them the less work they do. A manufacturing friend lately showed me his books for the past year. He increased wages per man 50 per cent, and increased the number of workers 20 per cent, and yet his total output fell down 15 per cent. When a man gets a dollar a day he thinks he is under obligation to earn the dollar, but when he gets a dollar an hour he thinks the world owes him a living."

This kind of an argument can be heard eighteen hours a day the year around on every street car, in every hotel lobby in the United States, and wherever and whenever two or more persons converse for five minutes. The problem is beginning to demand almost as much attention as that of the relative merits of different picture shows. In discussions of this sort my fellow farmers and I are seldom represented and we are naturally, therefore, given the worst of it.

But the problem is by no means so simple as all that. There are many points to consider, and putting the blame on the fellow who happens to be absent will never give the right answer. The question will not down. It recurs on all occasions. What is the cause of the high cost of living? Who is profiteering? How can the economic burden be more equitably adjusted?

In the various answers to these questions there is too much evidence of class antagonism. We are told that the wages for labor must remain at the high war level, or even be increased, but that the prices of farm produce must come down. Now, the farmer is a worker, taking his wages in the form of returns from sale of products whenever there are any returns. If the price of these products is lowered without other compensating adjustment, the wages of the farmer are automatically lowered. In other words, the city consumer would argue that the wages of all workers except the farmer must be raised, but that his must come down! Plainly, some city folk are making strange demands.

Nearly every one of the numerous schemes for reducing the cost of living are frankly based on the assumption that the plan will result in increased production of foodstuffs, and will, therefore, reduce the cost of such material. In plain English, practically all of these schemes are direct attempts to induce overproduction of farm crops. The various land-settlement schemes are largely justified by their promoters with the argument that by greatly increasing the area of cultivated land the prices of farm products will be lowered.

Farmers are blandly asked to accept such a program as meeting the national needs. Frankly, is not the advocacy of such methods evidence of a lack of the sense of humor? To ask the farmer deliberately to overproduce the materials upon which his living depends, and thereby to reduce his income, is in principle the same proposition as asking organized labor to take part in the importation of Japanese, Mexicans, and Hindoos in order to reduce wages.

How, then, can we best proceed to reduce the total amount of foolishness written about agriculture? Possibly by getting the city man acquainted with the farmer. The farmer knows quite a bit about farming. Perhaps the city man can learn something from him, as in the following cases:

Two years ago several bulletins on poultry fell into the hands of Albert Mahon, a professional accountant. Just a few days before Albert had told his wife very emphatically that Farmer Flaherty, who brought them their eggs, was an unmitigated robber.

"Why, look here!" said Albert. "When I eat these two four-minute eggs it's just the same as swallowing 12 cents. It's an outrage. We have room in our back yard. I am going into the poultry business—on a small scale, you understand, my dear, say, five or six hens and a rooster. That will give us eggs for our own table and a few to sell to the Robsons, thus paying our poultry expenses and making our breakfast eggs pure velvet, you see."

A fine plan it obviously was. They constructed very modest quarters for their fowls-to-be. Albert complained of the high price of lumber, nails, paint, and other materials, and wages were really atrocious. But the initial expense of a new industry is always large. One must be long-headed enough to keep his eye on the future returns. Mrs. Mahon wanted to buy a few plain White Leghorns or Plymouth Rocks. But Albert had heard of a breeder of Buff Orpingtons with a pedigree that came over with William the Conqueror. The breeder parted with five pullets and a cockerel at a price which Albert refrained from mentioning.

During the next eighteen months I occasionally saw Albert, but he was neither boastful nor communicative about the chicken business. At last he made a clean breast of the matter and showed a carefully kept set of cost accounts on his prize Orpingtons. Albert was interested chiefly in eggs, and had calculated the whole business on the basis of egg production. It had cost, on an average, $2.32 for each dozen of eggs. The next step was to kill and eat the fowls that laid the golden eggs. Finally, Farmer Flaherty was entreated to explain how he did it even at the prevailing high prices.

I remember, as if it were yesterday, the crusader's enthusiasm with which Joe Spooner set forth to gain his fortune on a Michigan farm. To Joe the end of the rainbow was in a potato patch. Joe had told his wife to order a whole bushel of potatoes at once and abandon the foolish practice of buying in quarter-peck lots.

"What, four dollars a bushel?" Joe exclaimed when his wife told him of her purchase. "That settles it. It's me for the potato business. A dry-goods salesman has no future."

Joe went into the new line of work body and soul.

"We'll rent first and buy later, after looking around a bit," Joe explained to Mrs. Spooner. "We must always be careful and conservative in making an untried venture—no jumping headlong into the dark." Joe made a trip to the northern end of the southern peninsula of Michigan. The very first day he found a farm for rent. The soil was very sandy and just the thing for potatoes. Joe closed the deal, and returned to Chicago to get the wife and household goods.

Joe didn't pretend to know it all. He was willing to take advice on the technical details of preparing the soil, time for planting, cutting the seed pieces, etc. He decided to plant nothing but the Russet Rural variety.

"Potato buyers won't want to bother with small quantities of several varieties," Joe mumbled to himself. "The Russet Rural is good enough."

In potato-farming everything goes out and nothing comes in till the crop is harvested. Joe noted with some consternation the mounting total of expenses which were piling up against the potatoes-to-be. The high cost of killing potato bugs and of spraying for blight gave Joe many an anxious moment. But there were the potatoes, growing every day. They would put a nice little figure on the right side of the ledger.

"It will feel good," Joe reflected, "to be at the selling end, [CONTINUED ON PAGE 24]



A manufacturing friend lately showed me his books for the past year. He increased wages per man 50 per cent, and increased the number of workers 20 per cent, and yet his total output fell down 15 per cent

Read This Yourself, Then Pass It on to Someone in the City

HERE is a plain statement of facts about farmers that it would do the folks in town a lot of good to know. When you have read it, if you agree with it, pass it along to some carping critic you know in town. Better still, if you care enough about it send it to the editor of your county-seat paper, or even to the exchange editor of the city daily you take, with the suggestion that it might do a lot of good if they felt like printing it. It is straight-from-the-shoulder facts like these that will do more than anything else to root out the stupid prejudice of some townsfolk against the farm folks. THE EDITOR.

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Company's Coming to Your House Next January! Who Can It Be?



By Harlan Smith

Illustrations by William Stevens





A VERY important visitor is going to call at your farm some day between January 1 and January 31, 1920—less than three months from now—and ask you a lot of very important questions.

This visitor may be a man or a woman, but the visit will be very important, especially to you. And it will be greatly to your interest to answer all the questions correctly.

So, on the chance that you might mistake your caller for an impertinent "butterin" and accord him short shrift, I thought I would write you through FARM AND FIRESIDE who and what he is, why he will ask so many questions, and what the whole proceeding means.

He will be a census enumerator, representing the United States Government, and on the facts you give him will depend the Government's attitude for the next ten years toward you and me and the other forty-five or fifty million country folks who keep the United States and a good share of the rest of the world supplied with three square meals a day, and most of their clothes.

Only one thing can fail to make the census of 1920 a powerful foundation of facts on which to build a stronger and more prosperous agriculture in America. That would be your failure to realize your responsibility to furnish accurate information when the census enumerator comes around.

This has been a matter of no little concern to Uncle Sam in planning his big census job. He has no fears of failure among those farmers who thoroughly understand the purpose and importance of the census, but he realizes that a few careless ones in every community, added to those grudges who nurse suspicions and distrust of governmental enterprises—a declining number, thanks, I believe, to the county-agent system—can upset the accuracy and reliability of census information. He is powerless to handle the situation satisfactorily should any considerable number of farmers indulge in guesswork.

It takes years of hard work by thousands of men you never even heard of to get things ready for this thirty days' of visiting in which you will share next January. And in this tedious, expensive preparatory work Uncle Sam is taking no chances. He is eliminating all the factors of human frailty he possibly can. He has been working for years to develop a system of handling census information that well-nigh precludes the possibility of error. Giant machines of steel and iron, almost human in their working, but lacking human liability to err, stand in the Census Bureau at Washington ready to masticate, digest, and assimilate the information from the millions of schedules that will begin pouring in to them from you folks next January. Recent tests of the efficiency and speed of these mechanical workers warrant the prediction by census officials that publication of the results of the 1920 census can be advanced eighteen months ahead of any previous census. It is expected that the first state bulletin—which will be for that State first sending in its schedule—will be issued six or seven months after the schedules are received. And it is hoped that tabulation of all the information can be completed in twelve months. Heretofore it has required two to two and a half years.

The agriculture schedule, you should know, is a four-page sheet containing—brace yourself!—63 subdivisions, with something over 200 items for which quantity, number, value, size, or age are to be given. At that, the 1920 schedule has only four more subdivisions than were carried in the 1910 census, although it covers a great deal more ground. That is made possible by a more skillful construction and arrangement of the inquiries.

To achieve that has required the sweat of expert brows in the Census Bureau, the Department of Agriculture, and of state agricultural representatives in many a conference assembled. It has required more than that. To be sure that the questions were complete enough to encompass our giant farming industry, and that they were simple enough to be understandable and so a man would not be kept up all night trying to answer them, the Census Bureau did something different this time: it tried out its preliminary schedule on 40,000 farmers all over the country. It asked these farmers—crop correspondents of the Department of Agriculture—to answer the questions for their own farms and to send in suggestions for improving the questions.

That test was most valuable. It showed the weaknesses—questions that didn't get all the information sought, or got it in a form that could not be used—and it brought in to Washington a flood of practicable suggestions many of which were adopted when the new schedule was made. Agricultural organizations of every kind, agricultural officials and editors of farm journals, also were consulted, and their ideas carefully considered. So after two years of work, during which three tentative schedules were tried out, the final schedule was made ready last June (1919). The Census Bureau never has taken such pains in preparing for the agricultural stock-taking.

Ninety thousand enumerators, working under the direction of four hundred supervisors, make up the census army that will take the field January 1, 1920—or January 2d, if they don't want to work New Year's Day. Fifty-five thousand enumerators will be engaged on the agricultural census. They will be given thirty days to visit and report on every farm in the United States.

There will be no politics played in selecting enumerators this time, census officials say. The law authorizing this census has changed the system of employing workers in the field. Instead of appointment by the President on the advice of congressmen, supervisors were appointed this time by the Secretary of Commerce on the recommendation of the Director of the Census. The enumerators will be appointed by the supervisors; but, for the first time in census-taking, they must pass a preliminary examination to show their fitness for the work. They must show that they are familiar with agricultural conditions, and that they understand the questions to be put to you. So much depends on competent, faithful enumerators that census officials will take precautions to see that only persons who are thoroughly reliable are appointed.

William L. Austin, in charge of the agricultural census under Samuel L. Rogers, the Director of the Census, and the man who is laboring to make this census the most accurate and comprehensive of American farming, told me he hoped that discharged soldiers would be attracted to the work of enumerating. He said he knew of no better material to do the job right. I suppose he meant that the lads who took the measure of William Hohenzollern and his gang, and invoiced their line of war goods pretty thoroughly, ought to find it easy to size up the home folks.

The man who comes to your farm will not be making a fortune out of his job, but he can make a little money if he works fast. Unfortunately, Congress did not increase the pay of these workers over the amounts allowed in 1910, although other wages have increased. He will get not less than 20 cents nor more than 30 cents for visiting your farm, except in some places where the Director of the Census may fix other compensation. Where enumeration is difficult, a minimum of $3 and a maximum of $6 a day is fixed by law. At that rate it means that the enumerator must get up and dust to make a fair wage, so be ready with your facts and don't detain him by asking questions about your neighbor's business. It would be unlawful for him to give you that information anyway. The average compensation of enumerators who get 20 to 30 cents a farm is about $5 a day, although some have made $10 and $12 a day, very fast working.

A fine not to exceed $1,000, or imprisonment not to exceed two years, or both fine and imprisonment, are prescribed as penalties for a census taker who publishes or communicates, without the authority of the Director of the Census, any information coming into his possession by reason of his employment on the census. Heavier penalties are prescribed for the enumerator who wilfully and knowingly swears or affirms falsely to the truth of any statement required to be made under oath, or for willfully and knowingly making a false certificate or a fictitious return.

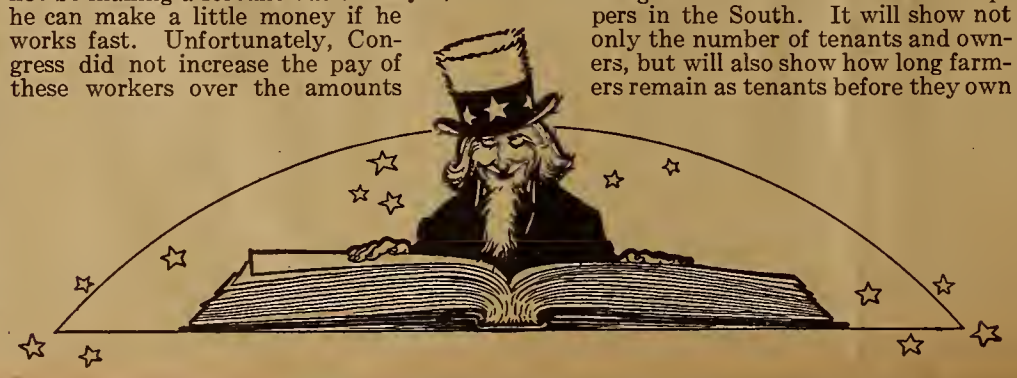
The Census Bureau keeps a sharp watch for crookedness.

A negro school teacher, employed as an enumerator on the last census in Mississippi, thought he saw some easy money. He sat in the schoolroom one day and dreamed a brand-new colored settlement. He saw his pupils married and living on farms within the district he was engaged to enumerate. He gave them children, land, cattle, hogs, crops, mortgaged indebtedness, and other farm pleasures and disappointments—all on a bunch of census schedules, all on one fine day. Then he turned in the product of his happy thought to census officials—sold the whole colony outright—and received therefore some $25 or $30, and some time later ninety days in jail and a fine of $250; also the cost of the trial, about $150.

One important change in the 1920 census will be the advancement of the date for taking it from April 15th to January 1st. There are very good reasons for that: the enumerators' visit will not come during your rush of spring work, and the record of live stock will not be taken at a season when new crops of offspring are coming on. Heretofore, for this reason, figures on young stock in the North and in the South have not been comparable. January is also considered a better time because the returns on crops obtained during the winter are more accurate than those gathered later, and they are comparable with the December estimates of the Department of Agriculture.

Now let's see how much more we're going to know about agriculture in 1920 than in 1910—how the census is to be extended.

Agriculture's problems have grown since 1910. We need light on many more phases of them. We want to know more about tenantry, so useful laws can be enacted to make it a stepping stone to ownership instead of a rut. The new census will make it possible to distinguish more carefully between the different types of tenure. It will distinguish between tenants and croppers in the South. It will show not only the number of tenants and owners, but will also show how long farmers remain as tenants before they own



their farms; the acreage of farm land a crop land operated by tenants and owne the value of buildings, land, machinery, a live stock.

Land utilization is another big probl the census will throw more light on. has become apparent that economic pr lems connected with land are at the fo dation of all movements for the impro ment of rural life and institutions," sai recent statement from the Department Agriculture. Through its reorganized l reau of Farm Management the Depa ment is starting an investigation of me ods of increasing the area of land in far and better and more complete utilizat of land now in farms. In addition to sh ing the amount of improved land, wo land, and all other land in farms, the n census will give the acreage of crop la crop land fallow or idle, acreage in pastu acreage in buildings and barnyards, a age in different kinds of pasture, and it show how much land suitable for crops not in crops.

We're going to know more about fa incumbrances, too. Heretofore the cen has shown the number of farms mortga and the amount of indebtedness. Af 1920 the purpose for which loans were m will be known and the rate of interest pa

Facts about forests and forest produ will be obtained in much more detail. T acreage in merchantable timber, in w lots, and in cordwood timber will learned, also the extent of chaparral, m quite, and other woody shrubs which h tofore have been thrown together un "farm woodland." The value of for products sold, and of those used on farm, will be recorded, and the amount ceived from the sale of standing timb The kinds of forest products cut on farm will also be given.

A new question added to this census show for the first time the number of dw ing houses, tractors, automobiles, autor bile trucks, and telephones.

Another very interesting new fact be the number of farmers selling fa products to or through a farmers' mark ing organization in 1919, and the value the products.

A more definite and usable classificat of live stock is to be made. Taking the c sus in January rather than in April helps make this possible. A more complete c sification by age and sex is provided, an will be possible for the first time to separ completely dairy animals and beef anim Distinction also will be made in breed stock and stock for slaughter, and both be by age groups.

The live-stock census this time will co "live stock on farms, ranges, and e where," instead of only farms and ran That will take in the stock of back-y and suburban producers, including poult bees, and so on. The count of town s will be made on a special schedule.

Instead of asking the value of crops, heretofore, the enumerators will learn "quantity sold or to be sold." By apply to these amounts prices obtained by Department of Agriculture's Bureau Crop Estimates a more uniform valuat the country over can be obtained.

Information about hay and forage be more definite also. Some new questi include crops cut for silage, amount of nual legumes cut for hay, amount of ka milo, sweet sorghum, sugar cane, and dan grass cut for forage or fodder, mat crops grazed or hogged off, and more tailed statements about pastures.

A special inquiry on irrigation will made later, based on names of irrigat farmers obtained in the general sched

I asked officials of the Census Bur and the Department of Agriculture w

My Experience in Making a Living From a Cut-Over Farm

By John Manning

IN TELLING my experience of making a farm out of what three years ago was wild land—soil covered with a heavy growth of timber and brush—I find it almost as hard as I did clearing the land. You hear a lot of talk about this cut-over land, but I want to tell you that it is no snap. It *can* be made to pay, but it will take as much and more hard work than farming anywhere else. If you go into it, read my story and do it with your eyes open.

It was a hard and steady climb to get to the top of the hill, and many times I thought of turning back. But my reinforcements were too good; my wife would not let me. I was discouraged many, many times, and would have quit. As I look back over the short space of three years and consider how ably and admirably she bore up under hardships, I can't help but think I have the best wife in the world.

I had always worked for other folks, but we saved our money, and three years ago my wife and I talked over the matter of buying a small farm. Land in Illinois and Iowa, I found, was entirely out of line. It was too high-priced, and our savings too small. We looked over the advertisements in the paper, and saw some ads about Marinette County, Wisconsin.

Upon investigation we found the prices in keeping with our pocketbook. I visited the county, and looked over the land. At the time I didn't pay much attention to the amount of brush and timber on the land, nor figure how hard it would be to clear. I was anxious to get a farm—everything else was a blank. I bought 40 acres.

The forty cost me $1,000. I came up in October and settled on the place. Two months before that my wife had made me a present of our second child, Mary—a mighty fine girl. It would be too trying for her to make the trip then, so she remained until the following spring.

I left the cabin and went to work as a lumberjack in a near-by camp during the winter, earning good money.

In April I sent for my wife and the two children. And with what I earned in the lumber camp and our savings we still had, we had another bit of money and I bought 40 acres more, adjoining the original purchase. Up to this time I hadn't begun to clear any land, so didn't know I was adding to my work.

The purchase of the 80 acres left me without funds, but the paying of cash put me in a position to get credit. I went to the bank and borrowed $600 with which to buy our food and clothing, dynamite to blast the stumps, and for working capital in general. I still owe this money. However, I'm not broke; my property now is worth about $5,000, including tools and stock, and I have $150 in Liberty bonds.

I dug into the work of clearing the land with considerable vigor. I was strong and healthy, and wanted to do the job in a hurry. Soon I realized I was up against a tough proposition. The hard work I had been used to was mere child's play to what was before me. I got discouraged.

Sunday is generally conceded a day of rest, but for the first two years to me it was only the first day of a new working week. Now I rest on that day. I worked early in the morning, and after supper when the moonlight was good. Stump after stump I pulled, and two seemed to hop up each time to laugh and jeer at me.

At night I'd come into the house to eat, tired, sick, and discontented. My wife, on the other hand, did all of the chores, looked after the children and her housework. She never complained, and was always bright and cheery. Often I wondered if this was put on, but I was never able to find out.

"To-morrow, John," she would say, "is another day. Each day brings us closer to success. Don't stop now, or you must admit you're licked." I'd take the bit in my teeth, and before daybreak was at it again.

Summer passed the first season, and the cold weather set in. Frost hardened the ground, and I couldn't do anything in the way of stumping. I cut up the logs and timber, and when snow fell I made a sled and hauled it to the city. The best logs I hauled to the sawmill, and had cut up into boards which I used to build a small barn and another shed for tools and things.

The first year had some compensation other than the land cleared. I sold cordwood, boxwood, and kiln wood for about $185, which proved sufficient to cover my grocery and clothing bills.

Food would have cost us more if it had not been for the garden. When I bought the original forty, in the rear of the shack was about an acre of clear ground which I worked up. We got enough stuff from it to cut the grocery bill about one third.

Often my wife and I had long talks, and she was always urging me to work harder. Whenever I would get real morose, and was about to pack up and quit, she would go over into the corner and start to cry. The last time my wife cried I didn't try to stop her. I went outside.





Above—Manning and his wife. Below—Mr. and Mrs. Manning, their two youngsters and their house and barn on the cut-over farm near Loomis, Wisconsin, which they carved out of the wilderness

In the shade of my barn I lit my pipe, and took inventory of myself. I weighed what I had done, and what was before me. I also figured what my wife had done to help me. In a few minutes I came to realize that her heart and soul were in the little place. The crude house was more to her than a town house on Michigan Avenue in Chicago; and the fields with their brush and timber were more than a sunken garden with orchids.

"Manning," I said to myself, "you're a quitter. You can't even keep pace with your wife."

The more I thought the madder I got. Finally I stuck out my chin, and the old determination which enabled me to hold my own with bigger boys when I was a kid came back to me.

I went back into the house. My wife was still crying. I told her I was going to stick, and she surely was pleased.

Next spring I was in the field as soon as possible. I worked from sunup to sundown, and when the moon was bright I *worked* too. The old feeling to quit often came over me, but all I had to do was to look at the eight acres I had cleared, with their growing crops. Then I worked harder.

This eight acres I had in corn, wheat, peas, and potatoes which we used for ourselves. The single acre of wheat yielded 22 bushels, which I sold at $1.90 a bushel; the peas brought me $6 a hundred, and the yield was 19 bushels, making an income of $68.40. The two acres of corn was caught by the frost early in the spring, but good weather followed and it grew and ripened.

My income last year was enough to pay for my food and clothing. My expenses were higher this year because of the price of meat.

When I came up here I bought a horse for $50. It was a good worker. I also bought a Guernsey cow, and now I have a herd of four with a two-year-old heifer and three calves.

Last year I bought an old sow from one of my neighbors. She gave me a litter of seven pigs this spring. I kept the corn for them, and got my 1919 seed from it too. This corn grew and the pigs are doing nicely on it, with grass, rutabagas, and other vegetables which we have to spare.

I will keep out the best of the sows and breed them for next year, and use the boars and poor gilts for our meat supply.

In 1918 I cleared about 30 acres, so that this year I have 38 acres in crops and hay. I have other land clear, but haven't had time to put out any crops. The second year of clearing was not as hard as the first, because I had a few acres in; and this year I am sailing along. I no longer want to quit.

Now I have to look after the crops and clearing in spare time. My wife, however, is helping me as much as possible.

The receipts for 1918 amounted to about $250, of which $140 came from the sale of wood. I had more wood to sell last year, having cleared 30 acres of land. I again saved the best logs, and had them sawed into boards. These with what I will be able to get within the next two years, by which time all of my land will be well cleared, will be enough for a new house which I plan to build. The farm is well situated, being only a mile from town, and on a state road.

The wood I saved and sold paid for clearing the land, which I figured cost from $40 to $60 an acre, leaving only a cost of about $15 an acre for brushing.

I don't intend to clear all of the remaining 42 acres, but will brush the stuff I intend to leave in pasture for the herd of cows I plan to have. The boards I have saved are worth about $600, being all hard wood.

Let no one come into the cut-over land to make a home unless he is willing to work hard. Until the land is cleared, my experience is that it is the toughest of tough jobs.

The $600 I borrowed is about gone. Some of it went for the cows, some for dynamite for blasting the stumps. I use a low-grade powder—say 20 to 30 per cent. It does not blow the stump out of the ground—merely loosens and splits it, so I can snake it out with my team. For this I use a block and tackle and a steel cable. I hitch one end of the device to a solid stump as anchor, and the other end on the stump I want to pull out.

This year I have 23 acres in crops, and the remainder in clover and pasture. I will get plenty of hay for the cows and horses for winter, and with rutabagas, corn, and oats, will have plenty of feed. I also have some fodder corn planted. I have out five acres of oats, three acres of corn, two acres of rye, three acres of peas, three acres of fodder corn, two acres of rutabagas, two acres of potatoes, and three acres of sugar beets.

The beets are a sure cash crop. The factory near-by gave me the seed to be paid for when the crop was cashed. I am guaranteed $10 a ton, and the yield will run about 10 bushels per acre. This will give me some money in the bank.

I have only a few chickens. They give me enough fresh eggs, and now and then I can cook up a nice rooster. With the chickens, pigs, and vegetables it doesn't cost much to keep the house going.

My cows are fairly good producers, being Guernseys and Jerseys. I sell the cream, the check running about $35 a month. I just sold one of the cows for $80. I bought her three months ago for $52, but she only gave enough milk to pay for her keep.

I am a mile from the Loomis station, and I only have to deliver the cream every day or two. This doesn't take any of my time, for my wife has to go to town and she puts the cream in the buggy. I used to sell whole milk to a cheese factory, but it took an hour a day to make the delivery. One hour a day is six hours a week, and thirty hours a month—two whole working days. I'm alone, with no help, so every minute counts. Another reason is I like to have the skim milk for the calves and pigs.

I do my own separating—or, rather, my wife does it. At first we used to have thin cream, not regulating the machine to make it thick. We soon found out this was a poor policy, and now make it as thick as we can. The cream runs from 30 to 35 per cent.

The losing of an hour and the thinning of the cream, together with other little items I have mentioned, may appear small at first glance, but not when you are working as I did for two years. *I aimed to think out everything before I started to work. This gave me a program, and saved lots of useless turns.*

Brute strength is a necessity in clearing land, but good, clear thinking is a big factor too. I must admit my wife did a whole lot of the thinking for our firm.

I am rather inclined to make light of my hard work, because I have succeeded; but nevertheless I think of it once in a while. But I discount my part when I think of how my wife worked to help me. She is a woman of slight build, but her muscle and fiber must be of tempered steel. Otherwise she could not stand up under the strain. This year she is working in the field.

But there is compensation coming for all that we have gone through. All of us are young. I am thirty-six, my wife thirty-three, Johnny nine, and Mary three years. Often I look forward a few years to the new house we will have on the road, and to the little car which I am going to buy.

This reward is due my wife and kids, and they will get it. The thought of it is making my road easier to travel now, and success is nearer each day.

I have kept records of every penny this farm has cost me, and how much it cost to clear it. I have [CONTINUED ON PAGE 29]

The Kind of National Organization I Think We Farmers Need

By Eugene Davenport

ONE of Mr. Hoover's chief difficulties at the outset and throughout the duration of the war lay in the fact he so often deplored, that there was no single national organization of farmers which could speak with some degree of authority for the occupation, and with which he could advise or make definite arrangements for production.

Accordingly, he was obliged to deal with the situation bit by bit, with this, that, and the other locality, producing interest, or group, often finding it necessary to create special advisory or administrative bodies at great expense and delay, only because the machinery did not exist for doing agricultural business in a large way.

There have been a small multitude of farmers' organizations of one kind or another for more than a hundred years, but none of them could serve the needs that suddenly developed, and the reason for this is of more than passing interest, because it shows that a new situation is coming to the front for you and me.

Most of these organizations of farmers have been educational, like the farmers' institutes, fair associations, etc.; or they have been designed to improve the methods of production in special fields, such as horticulture, dairying, cotton-growing, sugar-beet production, and the like; or else to promote the interests of some particular breed of horses, cattle, sheep, or swine. Exceptions may be found in certain gatherings, such as the Farmers' National Congress, or the Drainage Congress, but these are meetings of individuals, rather than responsible bodies of men with stable and permanent organizations.

The Grange is a notable exception in many ways, and, like all the others, it has had a powerful influence for good. Even so, it is not a body with which Mr. Hoover or anyone else could "do business." It is educational and social rather than economic, and while it has to some slight extent functioned in the fields of trade, it has been almost exclusively as a purveyor of the things which farmers buy to consume rather than of the commodities they produce to sell.

Aside from the Fruit Growers' Exchange of the Far West, we have no strong associations of farmers organized for systematic selling, and that is why Mr. Hoover found his hands practically tied under a good many embarrassing, not to say dangerous, situations.

For example, when Lord Rhonda cabled desperately for seventy-five millions of bushels of wheat in the spring of 1918, the Food Administration did not know whether we had that amount in America, and *there was no one else who knew, or with whom Mr. Hoover could deal* as a first step in relieving the distress of the Allies. The result was that he was obliged to stop in the midst of things and create special machinery for finding the wheat and for getting it together.

When the Food Administration had occasion to discuss "fair prices," there was no authoritative body to speak for the farmers. It was therefore obliged to be constantly creating new commissions or boards to deal with each new problem, as, for example, the price of pork or rice. Sometimes the arrangement was made by conference with important dealers, but very rarely could it be made with the *producers*, because nobody existed that had sufficient authority to speak even in an advisory way. A farmers' national chamber of commerce, or some such general body, confessedly commercial, would have been a godsend to us farmers in our emergency.

Under the circumstances the Food Administration was obliged to rely for increased production upon the "requests" put out by the Department of Agriculture. To the credit of American farmers those requests were honored, and, so far as increased production is concerned, they availed because backed up by our intensely patriotic desire to do everything that could be done to win the war. Such methods, however, succeed only in a national emergency. They do not constitute a basis for business in time of peace.

While the war created an emergency, it did not create the lack of organization situation. It simply brought it to the surface. The situation was there before, and it is there now. *There is no responsible national body that can speak for agriculture in a business way.*

In the county farm bureaus now being organized under the federal legislation known as the Smith-Lever Act, there is gradually being built up a series of local organizations of farmers that are hoping to do business co-operatively. These bureaus are coming to be organized into state associations, which in turn are perfectly capable of federation into a national agricultural association.

Any such national body to be effective in a business way must be closely tied up with *local* organizations that reach the individual farmer in such a way as even to underwrite bids and to enforce contracts upon the ultimate producer.

It is said that farming must always depend upon an open market for the disposal of its goods. But the Western Fruit Exchange is not so dependent. Not a sugar beet will be planted this year anywhere in America except upon contract, and the principle is capable of indefinite extension as soon as adequate machinery is provided.

We are gradually providing this machinery through the organization and experience of the county farm bureaus, and as these combine into large units the machinery will be complete, *provided the ultimate object is kept always in view.*

That object is not to "bust the trusts," but it is to *do business.* It is not to get the "farmers' rights," but to deal with the world in wholesale ways, and to make such connections with big business as may be necessary to bring the producers most readily and most successfully into contact with the world of consumers.

Such a national organization must be *built upon local units*, not the reverse. That is to say, the national agricultural association that shall live and do business will not be organized first at some great national gathering with local chapters to be organized later. The process will be the natural one. The local associations will *first* learn to do business along necessary lines and by perfectly natural processes, and then the larger organizations will inevitably follow.

This national organization will not be born in a fight, nor christened "for protection." It will be born in the process of everyday affairs, and its purpose will be not to obstruct but to facilitate traffic and trade. It will be not negative but positive in its impulses and processes, and it will serve to make a bond between the farmers and the farm upon the one hand, and the other commercial interests upon the other—interests which, because they involve fewer people, have gone further along the road toward ideal organization and management.

The Fruit Exchange and the sugar industry have shown us what can be done, and they have worked out many methods that will be found useful, even needful, in the larger and more complicated measures of handling those phases of production which, like farming, are in the hands of multitudes of individuals instead of being organized under a single roof, or in other small compass, and managed by a few officials. Until farming can find ways of making a better connection than has yet been made, the individual farmer will continue to work always in the dark, and often at a disadvantage, nor will the public be either well or cheaply served.

The conditions breed suspicion, ill feeling, resentment, and often open violence. The conflicting interests of producer and consumer must be brought together in conference around the same table, with members few enough so that conference can take the place of speeches, and thought be shaped by discussion rather than inflamed by "resolutions." Such a body is greatly needed, and its local centers are already developing in our county farm bureaus.

Every time one of these bureaus takes a contract to furnish a stated number of horses of a given grade, whenever its members sign a milk contract, whenever they pool their wool clip, wherever they organize a co-operative grain elevator or a co-operative shipping association, then and there these bureaus are laying foundation stones for the national agricultural association that hopefully may soon be born, not of violence or in anger, but of human necessity and in the way of commerce.

A Bean That Makes Bad Medicine for Her Fellow Indians



PERHAPS you never heard of the peyote bean, and the terrible dreams it brings to those who chew it. Perhaps you didn't know that among Indians and whites in the Western States, peyote "eats" have demoralized thousands of men, women, and children, often killing them outright after a protracted debauch.

This Indian woman—Red Bird, of the Sioux, direct descendant of the great Sitting Bull of the Black Hills country—is devoting her life to the fight against it.

Born on the reservation, Red Bird witnessed the debauches, lasting days and nights, that were indulged in by her people over the bean-like bud of the scrub cactus that abounds in the Mexicos. She saw the whites come in and join the midnight orgies. She saw babies and old men killed with the "medicine." She is to-day Mrs. Gertrude Bonnin, secretary of the Society of American Indians at Washington, D. C., spending all that she has of time, money, and energy in her fight against the peyote bean and its awful effects.

When Mrs. Bonnin appeared before the Senate Committee on Indian Affairs, she brought testimony to prove that unscrupulous dealers in peyote (pronounced pay-oh-tee) have for years taught Indians and whites that the powerful drug bean has a religious significance, and that the sensations which they experience when they attend the debauches and dance incantations around a pile of it on a pedestal are Christian feelings inspired by the Christian God, and that they will open the gates of heaven.

"I am sure," says Mrs. Bonnin, "as I can be of anything, that peyote will fill America with 'mescal' fiends just as opium filled China with opium eaters. Throughout all the Indian tribes, and increasingly among the whites of the Southwest, 'mescal eats' are becoming more common as liquor is wiped out.

"For these affairs, men, women, and children club together once a week, buy a sack of beans from the growers' agent for from $75 to $150, and send out word to the eaters. These come trooping in from a radius of 100 miles around on Saturday night, and gather about the 'spirit.'

"The eat begins with gibberish and the beating of drums and cymbals as the faithful start their orgy. It grows more lively as the drug takes effect, and by early morning it has degenerated into a wild debauch of unspeakable scenes. Some of the victims become paralyzed. Others scream and charge about the room under the spell of wild visions. They see lions, tigers, snakes, beautiful birds, and marvelous fields of color swirling around them. Sometimes the imaginary beasts and scorpions bite them, and they scream with pain. There is documentary evidence also to prove that hundreds of babies are killed annually by the giving of a spoonful of the spirit, or peyote tea, to chase the devils out of them.

"Dr. Havelock Ellis, describing his sensations after eating only three of the beans—whereas the usual feast for one person consists of 36 beans—said that his first symptom was that of immense strength and wonderful intellectual power, but that later he felt faint, with a very low pulse. Then he became paralyzed, and though he was conscious and knew all that was going on about him, he could not so much as move his little finger or turn his eyes. A pale shadow seemed to hover before his face. Then visions came—slowly at first, then rapidly. The first was of a vast field of golden jewels studded with red, crimson, and green stones—a wonderful vision,—a dull rich glow suffusing the whole.

"Then came flowers, the rarest and most beautiful he had ever seen, floating before his eyes, and, hovering over them, brilliant silver butterflies. Then a hollow revolving cylinder lined with marvelous mother of pearl. Then waves of light and shadows flushed with violet and shot with floating white draperies and feathery forms."

It is, as Mrs. Bonnin says, "bad medicine."

And This is How They Are Going After It

FARM organizations of a national character that are organized from the head down usually fail to accomplish their purpose because there is a lack of interest and support on the part of the individual farmer. To get the sort of a national farm organization that Dean Davenport and all of us would like to see, there must be a backbone of strong local units. A conference of representatives of various state farm bureaus will meet in Chicago, November 12th and 13th, for the purpose of perfecting a national farmers' association based on state farm-bureau organizations.

This meeting is the outgrowth of a conference held at Ithaca, New York, February 12th and 13th, at which time representatives from the state farm-bureau organizations of the States of Illinois, Iowa, Massachusetts, New Hampshire, New York, Vermont, Ohio, and West Virginia, together with farm-bureau presidents informally representing the States of Pennsylvania and Delaware, met and discussed plans for a national federation of farm bureaus. The chief result of this meeting was the appointing of the following committee to draw up plans for the permanent organization to be effected November 12th and 13th: O. E. Bradfute, Ohio, chairman; F. M. Smith, New York, secretary; J. E. Sailor, Illinois; C. H. Gary, Missouri; E. J. Cornwall, Vermont.

Why the Pennsylvania Dutchman is a Prosperous Farmer

By Henry Irving Dodge

I HAVE just returned from one of the most interesting trips of my life—a visit to the land of the Pennsylvania Dutchman. I knew of old how prosperous and successful he is, and I went down there to find out *why*.

I knew of Pennsylvania Dutchmen who, starting with $100, had a $5,000 farm and money in the bank in three or four years. I had known Dutchman after Dutchman to accumulate property with surprising quickness—and every speck of it by hard, honest work; for the Dutchman is above all honest.

Why can he do with seeming ease what you and I find so hard? What methods does he use that we don't? Can you and I use them and accomplish the same results? To this last I answer: We can.

The keystone in the arch of the Pennsylvania Dutchman's success is reputation. He attains reputation by the studious practice of industry, thrift, honesty, and cleanliness. He makes them all help build up his reputation.

That trip among these remarkable folks has made me think more about reputation than anything that ever happened to me. It made me ask myself what *my* reputation is among the neighbors, with my banker, among the business men I deal with. Maybe it will suggest the same line of thought to you.

It has shown me how vitally important a good reputation is to a man's success. Without a good reputation I can't borrow money at the bank. I can't get credit at the store. I can't command the confidence and respect of my neighbors. Therefore I cannot succeed as I should.

The late J. Pierpont Morgan, talking to a man in his Wall Street office one day, remarked that a millionaire is not a man who has got a million dollars, but a man who can *raise* a million dollars. And that man cannot raise money unless he has character and reputation. And that, therefore, coming down to plain facts, *wealth* is *reputation*.

That is true of you on your farm, of me on mine, and of every other man, wherever and whatever he is. The truth of it never was more clearly shown than in the experience of the Pennsylvania Dutchman. Let us examine his record and see how:

A lady I met had 10 farms, averaging 150 acres, left her by her husband. A relative of this lady, a professional man, had, when alive, 28 farms. I expressed astonishment at the fact. "That's nothing," said she. "There's a man down south of here who owns 100 farms."

"What do you make on them?" said I.

"About 12½ per cent on present valuation."

"How does that compare with what your husband made?"

The lady smiled.

"He made 2½ per cent. But that was a long time ago." She knitted and reflected for a few minutes, then said: "I think I'm doing a little better than my neighbors. Ten per cent net is about the average earnings for a good farm in this section. That farm, the owner of an 80-acre farm, worked by a tenant farmer, would net about $800 as his share. Last year some 150-acre farms I know of earned for their owners $2,500 each. In some cases the milk thereon alone brought $1,500."

The milk, remember, belongs to the tenant farmer.

"It costs more for a tenant farmer to stock a farm now, I take it."

The lady smiled indulgently.

"Forty years ago a certain man I know stocked an 80-acre farm—in a less ambitious way than he would to-day, perhaps I'll say—for $800. His four good horses cost him $150 apiece; his eight cows $25 a head; that left him $400 for his machinery. The same cows now would cost $100 apiece, and the price of the wagons and other things has more than doubled. The same farmer reckons it would cost him $3,000 to-day to take up this profession."

"Great Scott! What show has a poor man?"

"No man is poor in this section that has a good reputation. A few years ago I knew a farmer who turned cigarmaker. He went broke, having only $100 left. He came to me for a 90-acre farm. *Knowing him to be a good man* I let him have it. I said the word, and the bank loaned him money to pay for his live stock and equipment, taking a lien on the same. During the five years that followed he not only supported his family in comfort, but also earned, free and clear, $4,000 worth of live stock and equipment."

"Splendid for a hundred-dollar start."

"Plus reputation," corrected the lady. She pondered a bit. "That sort of thing is common enough about here. Another tenant farmer started with $250 on a farm of the same size, and made a similar success. That's the way a man can capitalize reputation out our way. If he's broke, the bank'll loan him the money to stock up. I'd back him myself, so would any other landlord. We've got to. Else what would become of our farms when our old tenants decide to give up work and go to the village to live? You see," she added, "the ambition of many of our tenants is to accumulate $5,000 in live stock and equipment, and $5,000 in the bank. That he calls his 'independence,' and if he chooses he can sell out and retire to a house in the village and live a life of idleness, which to him means some lucrative job near home or working by the day for other farmers."

"Strenuous idleness," I commented.

"Pennsylvania Dutch idleness," the lady enlightened.

Pennsylvania Dutchland comprises—I was about to name the counties in an offhand way, but remembered that local pride out there is very great, so I will name them in alphabetical order, thus obviating the stigma of partiality—roughly speaking, Berks, Dauphin, Lancaster, Lebanon, and Lehigh counties.

Nestling in the dimples of the landscape one sees beautiful old brick or stone houses—many of them veritable mansions—decorated with crimson rambler, vine-clad and mellow, huge stone barns of Swiss pattern, covered with ivy, and fences and fields and orchards as well groomed in every detail as a stallion on parade. There are no ragged edges in Pennsylvania Dutchland, no fences in disrepair, no depressing, unkempt, wood-colored buildings No mushroom growth, this beauty spot.



This Pennsylvania Dutch farmhouse near Womelsdorf, Pennsylvania, is said to be about 200 years old. Observe the acute angle of the roof, which indicates age, architecturally speaking. The two round holes near the apex of the roof were made for defensive purposes. Through them the wily, lurking redskin was discerned and appropriately welcomed.



Pennsylvania Dutch kitchen. Observe huge chimney in which the stove is set, with doors enclosing to confine heat in summertime. In these huge chimneys the farmers and their wives used to sit and smoke corncob pipes a hundred or more years ago. The "home assistant," Liza Kessler, who is seen sitting in the chair, does all the house and garden work. Electric lights in these houses are common throughout the great Pennsylvania Dutch section. The exquisitely neat condition of the stove, cupboard, and floor is typical of Pennsylvania Dutch kitchens.

No, it was wrought by the hand of man, the slow creation of unceasing industry, ever-vigilant thrift. The prosperity of it all is time-honored, substantial. There is no poverty in Pennsylvania Dutchland—poverty as block dwellers in the great cities know it. And how could there be, since thrift is ever the handmaiden to industry out there? And I do positively affirm that all aforesaid beauty and prosperity are due to the first four words in the Pennsylvania Dutchman's Bible: Industry, thrift, honesty, cleanliness—one and inseparable—applied to make reputation.

But why do we call our Pennsylvania friend a Dutchman? He's no more a Dutchman than I am an Englishman. His father may have come from Sweden, Switzerland, Germany, Wales, or any old place. But he's generations deep in American soil.

With the Pennsylvania Dutchman farming is a profession, not a makeshift. It's in his blood by inheritance, just as it was in the blood of his great-great-grandfather by inheritance. He has developed farmer sense just as the Indian developed forest sense. He loves his land; he's kind to it; he doesn't work it to death; he realizes that it must be fed, sustained, just like a living creature, if it would bring forth fruit unto his hand. He knows the soil by intuition; he can smell the possibilities in it; and he transmutes every ounce of virtue it contains into crops, and so on into coin.

There are two classes of farmers in Pennsylvania Dutchland: the landlord and the tenant. The landlord, you will say, is—well, the landlord. Right. But often he is a tenant farmer as well, working some other fellow's farm on shares while some other fellow works one of his farms on shares. Cases of this kind may be unusual, but are not extraordinary in Pennsylvania Dutchland. *I met a tenant farmer who owned three farms and was landlord to the tenant farmers who worked them.*

The tenant farmer in Pennsylvania Dutchland, mind you, is not a hired man with a cottage near the barn. He's a full partner, and almost always lives in a wonderful red brick or gray stone mansion, for that's the way the Pennsylvania Dutch farmhouses strike an outsider.

For example, I saw near Womelsdorf a stone mansion—a farmhouse—of patrician style, the acute angle of the roof architecturally indicating its age, some two hundred years, I was told. Near the apex were two ten or twelve inch, star-shaped holes, through which the wily, lurking redskins were discerned and appropriately welcomed, let us hope.

The owner furnishes land and buildings. The tenant farmer furnishes live stock (horses, cattle, hogs, and the like) and equipment (wagons, plows, hay rakes, mowing machinery and the like) adequate to the operation of the farm, and customarily worth from $3,000 to $5,000. The amount of cattle and other live stock the tenant may maintain depends on the size of the farm, and is provided for in the lease.

The tenant farmer rarely makes a change. He doesn't believe in it. A certain landlord told me that one of his farms had been worked for forty-seven years by the same man, and was now being worked by the man's son.

It is the tenant farmer's ambition to own a farm of his own. It is the landlord's ambition to own more farms.

Reputation is the tenant farmer's stock in trade, more valuable even than money. And in Pennsylvania Dutchland, where everybody knows everybody else, or can find out about him, it's easy to separate the goats from the sheep. As a consequence, there are mighty few goats left. Also, one can capitalize the reputation of his father before him, and his grandfather, out there, because they're all interested in one another's families. Said a tenant farmer, who was also a landlord:

"The fact that a good many of us—tenant farmers—operate other men's farms, while tenant farmers, who may themselves be landlords, operate ours, is responsible, I think, for the very equitable terms of the lease between landlord and tenant." He laughed. "You see, I can't ignore the complaint of my tenant when I myself may make the same complaint to my landlord. It is quite possible that my tenant might be my landlord. On the other hand, I wouldn't exact from my landlord concessions that I would not make to my tenant."

Verily, the lease between the Pennsylvania Dutch landlord and his tenant is a model of equity. Every minute detail is written into the instrument. Long experience has taught owner and tenant alike the wisdom of being literal, concrete. So, while men of the strictest honesty and blessed with reciprocal confidence, they deem it wise to keep their powder dry. For this reason such a thing as a lawsuit between owner and tenant is almost unknown. When a cause of disagreement does arise, it is almost invariably settled out of court. Not only is this a less expensive proceeding, but neither landlord nor tenant fancies the reputation of being a litigious person—fond of law, and to be avoided.

On the other hand, the spoken word alone—and that without witnesses even—is enough to bind the bargain as to the renewal of lease.

"Leases," my informant went on, "are never written for more than a year—from April 1st to April 1st. The renewals are always made early in September, just after the sowing of the winter wheat. No hint of the continuance or severance of the relations of [CONTINUED ON PAGE 43]

Does Raising Poultry Really Pay, or Had You Better Give It Up?

Answered by Readers of Farm and Fireside

YOU probably remember that discussion we had a few months ago with Mr. C. W. Hunt about the poultry business, in which he cast some doubt on our desire to print the truth about the business.

In the same issue that we printed his letters and our replies we also printed his article, just as he wrote it, in which he said he told the real truth about the poultry business.

Well, Mr. Hunt's fellow subscribers have been bombarding us with articles and letters in reply to his story ever since, and inasmuch as the replies come from other readers, instead of from us, we herewith put some samples of these before you, in order that you will have both sides of the case.

Personally, we are going to keep our oar out of this matter, and simply turn the pages of FARM AND FIRESIDE over to you to settle it among yourselves.

HERE is a letter from J. R. Mooney of Butler, Missouri, an importer and breeder of Tom Barron's strain of English Single-Comb Brown Leghorns:

"The experience of Mr. C. W. Hunt as detailed in the June FARM AND FIRESIDE simply tells the story of a man who did not succeed as he wished to. There are many such failures, simply because it is the general impression that anyone can raise chickens. It is like the old story of the man who so often fails because of the idea that anyone can farm, when farming is one of the most particular of businesses and requires more knowledge than many professions or trades.

"Because a man may be a successful general farmer does not say that he would be successful in the poultry business, or as a fruit farmer or dairyman.

"It is generally considered among practical poultrymen that a hen to be profitable must lay at least 100 eggs a year. The surplus above that is the profit. Mr. Hunt's hens by his own figures did not average 80 eggs. Also, he had among his flock an incurable disease and did not eradicate it.

"One might as well try to dairy with a lot of scrub cows, which would not give enough milk to pay for their feed, and which had tuberculosis, and then claim that dairying was not profitable. It is not, to some men.

"There are many flocks of hens in the United States that do pay, and many that do not. A good flock will average 150 eggs a year. Few will average over 175, though some hens will lay close to 300 eggs.

"White diarrhœa is incurable, and when a flock is infected with it that flock cannot be profitable. It is a germ disease, and is generally transmitted from a hen to her chicks in the yolk of the egg. An infected egg will hatch as well as any egg, but when the chick absorbs the yolk the germ gets into the bowels of the chick, and it is doomed. Chicks not infected will get the disease by picking the droppings of those infected, becoming infected just as people do with typhoid fever.

"The Storrs, Connecticut, station did inspect hens for white diarrhœa, trap-nesting the hens and examining the yolk of the egg for the germs, and then certifying the hens as free from it or as carriers. The disease does not seem to affect the mature stock much, but it does get most of the chicks that have it.

"It is a wonder Mr. Hunt could make expenses with stock infected with such a disease.

"Some people think because a hen is a Leghorn she should be a fine layer. This is a mistake. Some Leghorns are fine layers, and some are very poor layers, just like all varieties of chickens. But as they are smaller and eat less, and set so little, they have been bred more for egg production than the larger breeds, and most egg farms have them.

"Egg-farming is just like other kinds of farming, some make a success of it and some do not. It is a mistaken idea that anyone can go into the business and make a go of it. Too many people think they can farm, and too many farmers think they can run a city business. Both generally fail, but both sometimes are successful in the change. It depends on the man, his knowledge, and ability to learn in all businesses."

HERE is one from R. C. Gifford of North East, Maryland:

"C. W. Hunt's article certainly was interesting, and I agree with most of the things he said; but somehow, whenever I think of that article, I have a feeling of having been "hit below the belt." He put too much of the blame for the failure of the poultry farms on the poultry, and not enough on the people who were attempting to handle them.

"It reminds me of a conversation with our local real-estate agent. He sells dozens of farms every year. He said: 'You know it is the queerest thing to me! Half the city people who come out here want to specialize in hog or poultry raising—the two hardest things to do successfully. They will buy any little old place that has some hog or poultry houses on it, and refuse to pay the least attention to a perfectly good farm right beside it. Those hog and poultry farms are like the proverbial bad penny: I sell them over and over.'

"However, I don't believe any farm will be a success which is run for poultry and eggs alone, any more than the farm in this locality which the city owner was going to for breakfast-bacon hogs. Those hogs were to produce nothing but breakfast bacon. They were not to have even shoulders and hams.

"Starting farming of any kind is a queer business; it is, figuratively speaking, like advancing your position in a battlefield—you have to dig yourself in. And you have to dig in in so many different ways.

"Also, on a battlefield you are working *with* the people around you; on a farm you are, with most products, working in *competition* with the people around you, and in competition with all the farmers of the country who produce the same things you do. That means, if you would be successful in farming, that you must really love the work, have experience, a pretty good head, and then get right up on your toes and stay on 'em. It is not just chance that so many country boys go to the city and get along well. Business ability is bred in them. It *has* to be.

"However, to return to poultry: While white diarrhœa cannot be cured, it can be prevented. We had a siege with it once. We got rid of it by disposing of every hen which showed the least signs of diarrhœa, and thoroughly cleaning and disinfecting. When the chicks are hatched they are kept in the hatching trays, under the hens, or in warm baskets until they are at least forty-eight hours old, when they are taken one by one and given three or four swallows of sour milk. If hens are to be used for hovering them, each hen is given not more than a dozen chicks, and her coop is in a sheltered, dry place. If a brooder is used, not more than 40 chicks are put in each compartment, and the brooder run so the temperature is 90 degrees when the thermometer is lying flat on the floor.

"Every precaution has to be taken from the time the eggs are pipped until the chicks are between three and four weeks old, to keep them from becoming chilled. From the time the chicks are seventy-two hours old until they are three weeks old they have all the sour milk, water, and grit they want, and very stingy feedings of rolled oats four times a day.

"In regard to egg production, the tim has come when we will have really to bree for increased production. Also, we wi have to have nests which can be used trap nests, if we wish, and use them as suc during the early winter months, or at lea for a few weeks. Then we will have to cul cull, and cull some more. The culling is th big secret. If it and the breeding work done consistently, it is surprising ho quickly the average egg production for th flock will increase, and each year keep c increasing.

"Since the defective pullets will not hav a chance to at least eat any more than the selling price, there is bound to be son profit from the hens which are left.

"Trap-nesting for a short time is th only way out, though. It will surely wee out all pullets lacking stamina, also pulle which later die of apoplexy, because th latter are in nearly every case physical defective and unable to lay eggs. If yo doubt that, perform post-mortem exar inations on all the hens you find dea where a purple comb is the only unnatur thing about them. I did that. It certain opened my eyes.

"Most any poultry raiser can tell th very good layers and the very defecti pullets, but the great majority are in th middle class. With these only the tra nest can show their worth.

"Perhaps all these things do not sou particularly promising. They are from e perience, not dreams. However, I am the poultry business to stay. Primaril because I really like hens. Secondaril because they averaged 140 eggs per h last year, and one dealer gave thirty cen per crate above fancy market quotatio for all the eggs shipped him."

MISS BESSIE LITTLE, Quincy, Il nois, sent this very interesting lett "For over thirty years I've read FA AND FIRESIDE with profit and pleasure. his history of his poultry experiences given in the FARM AND FIRESIDE, M Hunt gives but the inevitable outcome all who engage in the business without t necessary knowledge thereof; this un they by experience gain the necessa knowledge. But not many can or will p severe to that point. There is no royal ro to the heights of successful poultry ma agement. The ascent must be persona climbed, step by step, by whoever gets or near the top.

"The plan of his housings and his savi 500 out of 2,500 chicks give a pretty f indication of Mr. Hunt's inexperience poultry-raising. Poultry experts wort of the name know that the white diarrh is considered, and for all practical purpos is, an incurable, contagious germ disea which may, and doubtless sometimes do come from eggs from diseased fowls.

"I've had over fifty years' experience poultry-raising, with various breeds greater or smaller numbers, and find th the business is a science and an art, quiring a systematized skill, scientifica applied by technical and psychologi knowledge—knowledge obtainable only years of intelligent observation, close stu and tireless labor and watchfulness. A without a fair amount of these qualifi tions one had better leave poultry cultu as a business to the dunghill flocks a those who know how.

"The science of the business consists considering the surroundings, the clima the market, in choosing the location, in ciding on the branch of the business to followed, choosing the breed best adapt thereto, and like things.

"The art of the business consists in t skill necessary to the making and insta ing of all the necessary appliances, fr the building of the houses to the maki of the nests.

"Besides a technical knowledge of these concrete, tangible things, things design and make, things necessary to s cess, there is another kind of knowle absolutely needful to satisfactory resu and that is a psychological knowledge poultry language—a sense knowledge just what every cheep, peep, chirp, cac crow, or other cry, as well as every n droop, flop, scratch, [CONTINUED ON PAGE

These Boys Will Go Back Home Better Farmers



CAMP SHERMAN soldiers don't believe that because they were wounded overseas they will have to give up farming, although some of them will never be able to do hard work again. While they are still in bed in the base hospital, they are given the regular correspondence courses from the Ohio State University College of Agriculture, and when they are well enough to move about they attend the outdoor classes. Many of these farmer-boy soldiers are studying to become teachers or managers of farms.

Even though they are only in the hospital a short time, they learn things that will help them when they get back on the farm. One boy had never seen sweet clover grow, and considered it a weed until he saw what it was doing on a near-by farm. Now he is determined not to rest until he gets it started on the home place. The best farms in the community are visited each week, and practical work is done in setting out shrubbery, planting lawns, and gardens.

A former professor from the Ohio College of Agriculture has been in charge of the work, and other instructors have been secured who are expert in different branches of agriculture. An excellent library and reading-room containing farm papers is an important supplement to the school. Several hundred convalescents have received the benefit of instruction in this department alone. The equipment includes laboratory apparatus and a considerable amount of farm machinery, including a tractor which is used on an adjoining 54-acre farm.

The above picture shows one of the classes studying the conformation of a dairy cow. Many of these boys will go back home with new ideas that will enable them to become real farmers, where otherwise they would have been content to drift along in the same old way. Camp Sherman is not the only camp giving this service, for the khaki college has branches overseas and in all the principal demobilization camps in this country where vocational training has been given. H. S.

Most Things That Can't Be Done, Can Be Done if You Go at Them Right

By "Bob" Seeds

NOTE: The first time we ever saw "Bob" Seeds was a good many years ago, when he was lecturing in Ohio. He and "Joe" Wing were sitting under a maple tree near a spring. They had known each other on the Chautauqua circuit, and to watch them talking and laughing made one realize that they indeed were kindred spirits. Later we saw Bob Seeds at a meeting of the farmers' institute speakers in Pennsylvania. He was a general favorite, and everyone gave a good word—not only to him, but also for him. We asked one of the leaders of the institute work in the Keystone State what he thought of Bob Seeds. He said: "I can tell you what all of us think about Bob in a few words. He is 'all wool and a yard wide.' We love him because he is honest, and simple and unaffected in his ways. Moreover, Bob is a good finisher as well as a starter." What Bob tells about himself in this article certainly substantiates that statement.

THE EDITOR.

DEAR EDITOR: You ask for the story of my success. You say there might be some pointers in it for other young fellows who are just starting out, or older boys who haven't got on as fast as they thought they ought.

My, if we could only sit down together and determine what success in life *is*, so all the world would say, "Amen," what a great thing we would accomplish!

I have known men to die worth one million and a half who were absolute failures. Other men stoned and imprisoned were such successes the world could not forget them if it wanted to.

Christopher Columbus, a mighty success to the world and mankind, was persecuted. It is about twenty years since I began to talk in public, about sixteen years on the public platform. I am starting now to fill 80 consecutive dates, with 103 dates sold for the summer of 1920, besides the odd dates, and never wrote a lecture in my life. Have been busy all my spring vacation working around my home, and the last thing I did before leaving home was to go out and look at my new garden that will be enclosed with a grapevine fence—beauty and profit combined.

Mrs. Seeds tells me that other lecturers spend their vacations in study for the future and that the first thing I know I will fall down, and fall down hard, for I throw my suitcases in the clothes press when I get home, and never think about lecturing till I go to pack them again.

But I have often thought if such a thing should happen and I would have to go home, what a job I would have with one of the best boarding houses in this world, kept by the best woman in the world! I know, because I made the selection myself.

Why do I lecture so much and why am I dated so far ahead? Because I try to live what I talk. I never told an audience anything that I did not believe and endorse myself.

So many people talk and stand for one thing and believe and do another. Nothing but money at the bottom of their minds. They don't act and live what they talk. This holds good in anything, farming, lecturing, manufacturing, bricklaying, or anything. If you're sincere and honest with yourself and those around you, and you like and believe in what you're doing, you will succeed. If not, you won't.

It did not hurt me at Selings Grove, Pennsylvania, and Hastings, Nebraska, and other places to stand on the platform and have people by the dozens jump all over me because they did not agree with me. I did not flinch an inch, because I had lived what I talked, and I knew it was true.

If I have been successful it is because I have always liked the work that I was at. I knew if I picked work that I liked I was bound to succeed. I have never had a vacation in my life. Rather, I have never had anything but a vacation. The whole year round is a vacation to me because I get fun out of my work.

I would rather live in my country home with some love in it and the lock on the front door broken than in any home in New York City with iron bars running up and down the windows. And when you see city folks break their necks to get to your home, winter and summer, you begin to think others are on your side also.

All this has taken place on a run-down, worn-out, and abandoned farm that caused Mrs. Seeds to cry when she moved from all the city comforts in Tyrone, Pennsylvania, out on the old farm that was abandoned for seven years. She cried because she knew what was in that house better than I did. I hate to talk about the bedbug, but certainly I do not like the way he makes a living.

I moved on this old farm because I lost my health, and I have friends in Tyrone, Pennsylvania, to-day, who talked to me and said the worst part of it was my dragging my family out on that God-forsaken place. They wanted to know why I did not buy a good farm if I wanted one. The truth is that if I had you would not know me 25 miles from Tyrone now. It is tackling and *doing* hard jobs that other men won't tackle that makes a man of you and brings out the best that is in you.

So out we went, and, to make a long story short, I found out that God made all the lands of the world fertile, and He never hauled a wagon load of manure or a wagon load of lime, nor bought a ton of fertilizer, but made all this world nice and fertile (except granite) with decayed vegetable matter, organic matter, humus holding the moisture when we have the heat. And I made up my mind that if God can do it I can, for God helps him who helps himself. I always liked what Elbert Hubbard said when he said:

"A man who never does more than he is paid for never gets paid for more than he does."

He said one day to a man across the street: "Jake, come and help us haul in alfalfa hay."

Jake said: "What do you pay?"

Hubbard said: "I will pay you all you are worth."

Jake said: "Guess I won't take it."

There are too many people like Jake, and they never get anywhere.

So I redeemed the old farm. I found out that as man abused nature and God's way, and destroyed the decayed vegetable matter and burned out the humus, God in his wisdom locked up the plant food to keep the duffer from starving to death the man who would come along later.

I found out that all I had to do was to unlock the plant food with decayed vegetable matter, the same as God did in the first place, and the State of Pennsylvania hired me to go over the State and tell my story. So I started. I fought it out on the platform and through the agricultural papers in many a fight, and from there they pushed me on to the lecture platform.

When I struck Sisston, South Dakota, in 1916, the town people wanted me to lecture on the "Mistakes of Life," and the country people wanted "How God Made the Soil Fertile," and as I was there two days ahead I went to the hotel and got up my new lecture, "The Way It Looks from the Road"—the way I have seen it from the road for the last fifteen years, and what makes it look that way.

Now, you see, I had seen, lived, and had the lecture in my system for years. It took the people of Sisston, South Dakota, to make the seed germinate and come through, and when I was through with my new lecture (the first time) the people of Sisston came up and said to me, "You can come back"—and I was back in 1918. If this is success, why, I did not do a thing but keep telling them God's truth. To live and talk and love the truth is the first principle of any man's success. No man ever goes away from me saying anything else but "It hurts, but it is true."

Every young man ought to work to a photograph in his mind. Ought to have an idea, an ideal and a goal; he ought to have his wagon hitched to a star; ought to learn to think. I know it is hard on the brain, but you can get used to it. Try it, but go slow at first. Riley said once: "There were weeks and weeks I could not think of a darn word," but he *got there*.

Folks ought to live decently—if they expect to succeed decently. At Madison, South Dakota, a few years ago, my second time there, I was lecturing on the "Influence of the Home," and without thought or past preparation I began to talk on the "Influence of the Hog Pen," and put it over, on the afternoon of the fourth of July.

I am arguing every day that thoroughbred people are created the same as thoroughbred stock—by environment, surroundings, conditions. Kindness and good food help to make communities good. How many people try to get through the world as high-brows on the record and standing of their sires, and by boasting of their breeding, when they have been drones all their life and the world is no better because they have lived!

"The story of my success," as you word it in asking for it, my dear Editor, is that of bringing up a run-down, forsaken, worn-out farm, which I sold a few years ago (except my home and ten acres) to a man who lately sold it to the treasurer of Westmoreland County, in Greensburg, Pennsylvania. You will please excuse the use of the pronoun I, for I can use no other in "My Story of Success," but I did nothing more than use the means at hand, and God and Nature did all the rest. I would say to others: "Go thou and do likewise." Most of the things in this world that can't be done, *can* be done if you go at them right.

What They Think of Him Around His Own Home Farm

(Reprinted from the Tyrone, Pennsylvania, "Daily Herald")

TYRONE takes a lot of pride in claiming Bob Seeds as one of its honored citizens, although he lives on a beautiful homestead (when he is at home) at One Hundred Springs.

Bob has made millions laugh, and he is known from coast to coast and from Canada to Mexico as one of the greatest fun producers on the American platform. He is producing silver linings to dark clouds, and driving the blues out of people's lives. We are proud to reprint, with our endorsement, what "The Billboard" magazine recently had to say about him:



"Bob" Seeds

"Bob Seeds is the only farmer in America who has made a success of both farming and professional lyceum and Chautauqua lecturing. At least that is the way it looks to the most of us. And this brings up the old, oft-asked question, How does he do it?

"More years ago than the colonel now cares to admit, Bob Seeds bought a run-down farm that had been sold for back taxes. He immediately began to clean it up and put life into its sterile soil. It wasn't very long before everyone began to talk about the magic change that was being wrought on the old place. Then the State of Pennsylvania got busy and carted Farmer Seeds over the old Keystone territory, so that he might tell other farmers how he had performed a miracle at Birmingham—the village post office bearing that pretentious cognomen, and his farm was right near the town. The Chautauqua drafted him. The lyceum put him to work telling his story in other States. Like Elbert Hubbard, Bob sold more than lectures. He gave more than any audience paid for. It was not long before farmers from all over the country began to send to him for the rich, alluvial deposits which Dame Nature had so generously hidden away under the rocks of his farm. He sold the soil by the bushel, and turned this old run-down abandoned piece of outdoors into a veritable propagating farm, where life and plant foods were almost created.

"Then the bankers and bricklayers, the merchants and the national gatherings of all kinds, began to draft him into service, and he has been busy telling them all about 'How God Made the Soil Fertile.' When he gets tired of that he tells them about how to make 'home' happy, and with it all he is never too busy to spread sunshine and good cheer to all who come in contact with him.

"Bob has that irrepressible flow of Irish wit that he inherited with his race. He is one of the few men who knew enough not to try to tell bankers how to bank and manufacturers how to make a fortune. He is a credit to our business, because as soon as he is through lecturing he crawls into his overalls and gets back to work, and as soon as that gets tiresome he creeps back into his platform clothes and hikes away with the first call of the lyceum or Chautauqua wilds: life to Bob Seeds is one great, joyous span, with no breaks.

"His stories have been collected and published and have a wide sale. He puts heart into his fun and soul into all that he does. He is a thorough American, a fighter for the right and a foe that crooks and sneak thieves hate to have around. He is uncompromising in his ideals and unbeatable in battle. Such is the man from Pennsylvania whom we are glad to call a friend, and that is the common feeling that penetrates the breast of the great general public that has heard him and of his neighbors who know him.

"He is the hub around which any crowd will gather where clean fun, good cheer, or horse sense is the magnet that will draw. Bob says he comes from Pennsylvania, where they make iron and ste(a)(e)l for a living; where he goes no one knows; what he does is an open book."

Kept Him Dry

"HE'S perfectly quiet, ladies," remarked the liveryman to the two girls who were about to hire a horse and trap, "only you must take care to keep the rein off his tail."

"We won't forget," they replied.

When they returned the liveryman inquired how they had got on.

"Splendidly," they exclaimed. "We had one rather sharp shower, but we took it in turns to hold the umbrella over the horse's tail, so there was no real danger."

The Way I Grow Good Sheep—

By E. Noel Gibson

I HAVE found sheep production profitable. In the last three years, this department of our 680-acre farm at Dundee, Illinois, netted us $10,000. And this year, with a 145 per cent lamb crop, I expect a good profit, despite the high price of feeds.

Lamb production is profitable with me because I make what the packer wants. I have found that a good fat lamb, weighing from 65 to 80 pounds, will bring home the bacon every time. It takes feed to make a lamb of this kind, but the money return is the best.

On our farm we make two kinds of lambs—early and late. There is a reason for this: We operate quite extensively in sheep, having 300 to 400 ewes, and this means we need lots of pasture. With a limited acreage of high-priced land we cannot provide pasture for 800 ewes and lambs at one time, so we get some of the lambs and ewes off early to leave room for the others.

The early lambs—we make about a load—reach market before the first of June. The idea is to get on the market before the big run of Western lambs starts coming. Prices, therefore, are better than later, when the supply is ample. The late lambs are shipped with the ewes along in November and December.

The ewes and lambs get no grain after they are put on pasture. This occurs when the weather is warm, the grass good, and the lambs strong enough to get about for themselves. They are carried on grass during the summer.

I figure the profits are greater on the lambs we carry along through the summer on grass; but, on the whole, there is very little difference between them and the early stock. For the average man, however, I would advocate the production of the late lambs. In the first place, the lambs come when it is warm and there is not much danger of losing many through cold and dampness. Another thing, very little equipment is needed in the way of housing; and then there is the big item of feed.

I have judged sheep for years—in Canada, at the Minnesota State Fair, and at the International Live Stock Exposition at Chicago. I have been around sheep all my life, my father having been in the business in Canada, where I was born. At thirteen I was showing our sheep, which won many prizes in this country and in Canada.

I love sheep, or I would not have raised them all of my life, and I am forty now. A man must like the business in order to understand it, and there is no live stock which requires as much care and attention as sheep. This is especially true at lambing time, when a man has early lambs. This is one reason why I advocate late lambs for the farmer who doesn't know the business, or who is just starting in.

And not only that, sheep must be watched all the time. They are very frail in some instances, and in others I am amazed at the hardships and treatment they will stand without breaking.

There are tricks in every trade, even in sheep production, and a man must know the ropes to get the best results. Flushing is one process to bring the ewes into heat before the normal time. I have to do this to breed in September for February lambs.

As a rule, we buy our ewes in August, and the stuff I want for early lambs is put on a grain ration of corn and barley right away. I put them on pasture, turning the bucks with them at night, and feeding in the daytime. I have learned that when the nights are cool and the ewes are getting grain they will breed earlier than if on pasture with no feed.

And in the cool of the night the rams seem to work better. Later on, when the weather gets cooler again, the ewes which have not been fed any grain come into heat, and I turn the bucks in with them at night.

We buy grade Western ewes of Merino foundation, coupled with a Rambouillet and Lincoln cross. On these I use a pure-bred Shropshire buck. I use 15 bucks, buying them as yearlings, and using them for four or five years. They cost about $50 per head.

The ewes for late lambs are bred in October, and are marketed with the lambs along in the fall and winter of the next year. The lambs then weigh about 90 pounds. They get no grain after they are put on grass in the spring, and are allowed to wean themselves.

By selling off our ewes and lambs each year, and laying in a batch fresh off the range, we are able to keep our pastures free from worms.

About the first of December I start to feed the ewes which are to lamb early, giving them about three pounds of corn silage and all of the clover hay they will eat. If some of the ewes are in rather poor condition, I sort them out, and feed them a little corn, oats and cottonseed meal. I like cottonseed meal for sheep, especially when I feed silage which is a little off condition. Oil meal is too laxative to be fed at this time.

A month before lambing time I give these ewes a little corn and oats, still feeding the silage and cottonseed meal, with all the hay they will eat. This provides plenty of feed for the ewe, and as a result she is able to produce a big, strong lamb.

The day before lambing I take away the concentrates and silage, and let her have only hay, with water; and the day of lambing, water alone. The ewe may be a little feverish, and water is cooling to the system.

The next day, however, I give her a handful of corn and oats, and a little silage, and gradually, as she regains her strength, increase the feed, giving all she will clean up. The idea of heavy feeding is to promote enough milk to grow the lamb as quickly as possible. Often, because of this feeding, when the ewe is a heavy milk producer, I have to strip the bag, especially if she had but one lamb.

Ewes need lots of care, and most especially at lambing time. I stay with them during the entire period, and for that purpose have formed my own ultra-exclusive organization called the Leg-o'-Mutton Club. I am the only member. Club quarters are located in the sheep barn, and large enough for but one cot and one person. When I am at the club, there is room for no one else. In fact, I can't turn around in it—I have to back out and in.

When I take up residence at the club I bring the alarm clock with me, and set it to be awakened every two hours. I get up and look around, and if any ewe is having difficulty in lambing I help in every way possible. I have found that I can sleep between midnight and daylight without interruption, for seldom does a ewe lamb during this period.

Ewes are funny creatures. If you don't watch them you'll lose a lot of lambs, and not alone from malpresentation. I have found that if a ewe is about to lamb, and she sees another ewe with a lamb, she will wait her chance and kidnap the youngster, taking it to some out-of-the-way corner. Consequently, when her lamb comes, she will either disown it or the adopted lamb, with the result that one will die, having no source of nourishment.

As a lamb is born I place it and the ewe in a small panel pen, about 4x4 feet. This gives the ewe a chance to get acquainted with her offspring, and the lamb a chance to start sucking. It also prevents kidnapping, and the possibility of the weak lamb being trampled by the ewes. I generally keep them in these pens until they are a week old.

It is an easy matter to arrange a set of panel pens before lambing, so there is no trouble when the time comes. When the lamb is a week old it knows its mother, and the ewe knows the lamb.

Some people say camouflage originated during the war, but it did not. The sheepmen of Scotland used it long ago, and so do I. If a ewe loses her lamb, and another ewe, not a heavy milker, has twin lambs, I take away one of these lambs. Before doing this I skin the dead lamb, and tie the hide on one of the twins. Then I put the youngster with the camouflage hide in the pen with the mourning mother. She is delighted at the reincarnation and soon gets to nosing and licking the ringer. First thing you know it is sucking away—making itself right at home.

The ewe is completely fooled, and in a few days she and the lamb are very well acquainted, the lamb keeping up his part, because I look every now and then to see that his false hide does not come loose. Then I remove the hide, and the ewe doesn't know the difference.

In the last three years I haven't lost a lamb from malpresentation or infection of the womb. One good way to help the ewe when she is having trouble in presentation is to use slippery elm and vaseline. Another is to use sweet oil and carbolic acid. Before lambing time I mix up a batch of each preparation.

I take an ordinary pane of window glass, and on it spread some vaseline. Then I sprinkle slippery elm powder over it, and mix until it gets a drab color. I mix ten parts of sweet oil and one part of carbolic acid.

I use the vaseline and slippery elm freely, and am never afraid to get my hands or arms soiled. One must use plenty of it, and sometimes it is a great help. If, after using this combination, the ewe does not relax, I tip the ewe and pour some of the oil and acid into the vagina. This usually does the business, lubricating the insides so that presentation will be easy.

When the lambs are about ten days to two weeks old, I dock and castrate them. Precaution should be used at this time to prevent infection in these operations. In docking, some people use red-hot pincers, severing the tail at a joint, and at the same time searing the ends of the skin together.

I use a common pocket knife, and sever the tail at a joint near the rump. A tail is very useless to a lamb, and sometimes will cause trouble when allowed to grow long. Impaction sometimes results when the tail becomes matted with dirt, and often it provides a fine breeding place for maggots, which creep into the animal.

If the ewe lambs are saved for breeding purposes, docking is very essential. Often a long tail will prevent proper mating.

Castrating can be done with the same knife, but more sanitary precautions must be used, because danger of infection is greater. Dip the knife in some disinfectant before the sack is cut, and there is no danger. It is a good policy to castrate and dock when the lambs are young, because they do not feel the effects as they will when older. And if castrating is put off, often the male lambs will take on a bucky appearance, and this detracts from the market value.

Castrating makes them gain faster, and it prevents them from bothering the ewes when they get older and begin to feel their "oats."

When the lambs are about three weeks old they will commence eating grain. Here is where another trick counts: I have found that lambs always flock to that part of the barn which has plenty of sunlight, so I place the creep, containing the mixture of two parts cracked corn, one part oil cake, one part bran, and one part oats, opposite the window, through which the sun shines.

Nothing attracts the lambs like the sunshine, and any time of the day they will be found basking in the shaft of sunlight. By putting the creep there they can't help but find the grain, for young lambs are awfully nosey. Really, one should have a sun parlor in his barn for the lambs.

In weaning the early lambs I merely take them from the ewes and put the mothers in the dry lot for a day or two on very little grain, [CONTINUED ON PAGE 30



Gibson and some of his cattle

Quality, Not Quantity, is What Gets the Money

JACK DEMPSEY took the heavy-weight championship away from Jess Willard, out in Ohio a few months ago, because he had the fighting quality to do it. Willard had all the quantity—weighed nearly 60 pounds more and stood a foot taller than Dempsey—but it availed him nothing.

It was ever thus. David, the pygmy, laid low Goliath, the giant warrior, because he had the quality of thought that enabled him to work out a scheme to bring the monster down.

Thus also does the small Western lamb of quality put more money in its owner's pocket than the big native lamb that tips a heavier scale.

The small gas engine beats the lumbering Percheron. The undersized, selected ear of seed corn beats the big, showy ear taken from the field merely for size.

"The race is not always to the swift, nor the battle to the strong." Quality wins in everything.

THE EDITOR.



Two of Gibson's able-bodied assets in the sheep business

And Why They Sell at a Profit

By T. J. Delohery

MUCH has been written about the economic value of sheep, and the profits which can be made in producing wool and mutton; but little has been said about mutton from the viewpoint of the packer and consumer—in other words, the kinds of animals the packer needs to fill the consuming demand.

Ignoring the marketing end of the business, and informing the farmer solely of the profit in sheep production, and their ability to clean up waste on the farm, has been more of a detriment than a benefit to the farmer.

In the first place, it has caused the producer to buy lambs indiscriminately at times, and he has paid very liberal prices for feeders, only to find, upon marketing, that he made a bad buy. He doesn't know the marketing end of the business thoroughly. An experienced cattle feeder doesn't buy feeders in the spring unless he has lots of roughage, because they are the highest at that time. And many farmers, changing from cattle to sheep, know this. Not knowing when feeders are the lowest, they buy whenever they take the notion.

Picturing sheep as farm scavengers is all right in a way, but when men start to figure they can make market lambs on weeds alone the information hurts more than it does good.

No better example of how erroneous is this impression could be had than the sale of a bunch of lambs from Iowa. They were bought as feeders in August, 1918, costing $17.50. After being grazed for two months, when they were marketed, the trade was low, and they were sold for $11 as "finished" product.

Their owner lost money, and quit sheep-feeding. He bought wrong, probably on the advice of some market man who had no insight into the future of the trade. The lambs were of fine breeding, and had all the conformation and quality needed to make a good bunch; but they had been fed no grain, and were not fat.

Farmers in the Corn Belt have been making strenuous efforts to get back into sheep production, but as yet their efforts have not been attended by any too healthy profits—in fact, not as much as they are able to make on cattle and hogs, even with a sheep market which is as good as either of the other two. Inexperience and failure to study the market are the answers.

The men who feed lambs often do not know how to handle them, and they buy feeding lambs when they are too high. For a man who raises his own lambs the lack of handling is the cause of his not getting the most possible out of the game.

Very few native lambs top the market. Of course, the output of expert producers in the country west of the range get the best results, because those men know how to make 'em. Western lambs, on the other hand, find no trouble in securing best prices.

Corn-Belt farmers ought to know more of the marketing end of the mutton business, because they haven't been in the business for years. The Corn Belt and the Eastern States quit mutton production about the time the present generation took the reins. Since then the range has been supplying the great bulk of our mutton and wool. They have the grass out there, and large areas of pasture, and that's why our men quit. Now the range is being broken up, and sheep-growing is moving eastward.

The range sheepmen produce a lamb the packers want. It dresses out a nice, tidy carcass, on the right scale. There is plenty of room for expansion in mutton production in the Middle West and East without hurting the market.

Mutton consumption is increasing, but as yet it is not on a plane with pork and beef. Wool consumption is increasing materially in the last few years. High prices have greeted both wool and mutton, and this fact has attracted the Eastern farmer. And there have been campaigns to put sheep on these farms. They are bearing wonderful results, but how much profit?

In late years the marketing of sheep has turned from aged stock to lambs, just as the demand for hogs has changed from heavy to medium-weight swine, of the butcher class. The market now wants well-fed lambs that make a nice, tidy carcass.

"The trade calls for light, plump, well-finished lambs weighing from 65 to 80 pounds on the hoof, and mutton weighing from 100 to 125 pounds," said H. A. Phillips, manager of Armour's sheep department. "The sale of poorly finished carcasses is usually very slow, but the demand is always active for the good stock.

"In this country few of our wethers are above three years old when taken to market. We are a lamb-eating people, but will eat mutton when lambs are not available."

These statements of Mr. Phillips' are significant and important to you as a sheep producer and grower. In the first place, they tell what kind of lambs the market pays best prices for, and tell you to breed the sheep which are early maturing, small in size, so they can be fat at 65 to 80 pounds. Western lambs are this kind, and it is for this reason that Western lambs bring better prices than the ordinary native product.

When gathering material for this article I stopped into the sheep house at Chicago to see Ben Cook, salesman for Clay Robinson & Co., and one of the most experienced men in the business. I went to him to get first-hand information as to the kind of stock the packers buy.

It was an easy matter for him to point out the good and bad lambs in a big pen. I asked him to catch the lambs, and to show me more definitely what he talked of, so I could relate it to you.

He picked the nearest lamb to him—a nice Southdown.

"This lamb is selling at top price," he said. "Feel along his back and see how well covered he is over the loin and ribs, and how the shoulders have no gap between them. The fat also carries out to the dock. The flesh is solid but springy, and it runs down over the ribs.

"Take particular notice of the thickness of the loin, and the solid flesh on the ribs. That is what counts to the packer. Now feel the leg of the lamb—the flesh there is firm and springy, and there is plenty of it. This lamb will dress out a carcass that will grade No. 1, and command the best price. This animal weighs about 80 pounds, the best weight you can get when fat. The public wants light cuts of meat, and this lamb would dress out in good shape.

"Feel the neck and see how short and thick it is. The chest is well developed and wide, and the fleece is long and well crimped, and has a good luster. Wool is selling high, and this is good fiber."

He slipped the lamb back into the pen, and from the adjoining lot took out an animal which was bigger, but evidently thinner. He had me go over this animal in the same way, and there surely was a difference—also in the price.

"This lamb," he continued, "is thin. The back bone is evident when you place your hand along the spine, and he is open between the crops. The flesh does not carry down over the ribs, nor back to the dock, and the leg of lamb is not as well developed as on the other animal. The loin, too, is not so thick."

The good points in sheep are the same as in lambs.

The wholesale cuts of sheep and lamb carcasses are leg, loin, and chuck. The retail butcher cuts the carcass into stews, chops, roasts, and other pieces, but in the table below I give the dressing percentage of the main cuts, together with the price. The table is the dressing percentage of a lamb weighing 80 pounds on the hoof, and dressing 50.75 per cent—a very good average. The prices, while not current, show the difference between grades.

From the prices it is readily seen why development over the high price cuts is essential to best prices on the hoof.

Wholesale Cuts	*Yield in lbs.*	*Price Lamb*	*Price Mutton*
Leg	15	$0.25	$0.22
Loin	10	.25	.22
Chuck	15.6	.17	.13

An important difference between Western and native lambs is that the native product weighing only 80 pounds would not be in prime condition. But many Eastern farmers are able to produce the best grade of lambs, at this weight, out of a cross of thrifty bucks and grade Western ewes. And native lambs, if they are of the same quality and condition as the Western lambs, will outsell the range product.

Prime native lambs come from worm-free pastures, a thing which does not trouble the range producer. Proper rotation is one method of accomplishing this vital necessity.

The small, plump lambs do not reach a very large size, but use the feed to lay on fat. The small lamb is usually well developed over the loin and leg, and the ribs are well covered with meat.

This development is largely due to breeding and feeding.

The first run of lambs to market in the spring is hothouse or spring lamb. These are dropped early, and are pushed right along on grain, usually weighing around 50 to 55 pounds when marketed. They bring extra good prices, and I know of one man—A. A. Maxwell of Defiance, Iowa—who made a specialty of producing them. He had no extra equipment, but had well-bred stock, and the lambs came early. He made a handsome profit each year.

However, the marketing of hothouse lambs is small, and the real run of spring lambs does not come until late in May and the early part of June. Tennessee lambs, the first of the Southern crop, start marketward about the middle of May, and catch the high prices. In June and July the Kentucky product is marketed, following which the Central States start to move their stuff.

The rangemen come last, along in the early fall, and almost up to the time the Southern lambs start coming.

Sheep Lore

By Joseph E. Wing

THE history of the sheep is written only in its frame, embroidered in its wool, or imprinted in its mental characteristics. The history of the sheep is in large part the history of the human race. Hardly any animal in the world has been so modified by association with man as has the sheep. Its ancestor is unknown. There is, so far as known, no long-tailed breed of wild sheep, nor, as far as known, any wild breed that will interbreed and make fertile crosses with our domesticated sheep.

Can you imagine what the primal wild sheep was like? Maybe the Scottish blackface gives a clue; they are wild, hairy, active, having much the habits of deer, with strong instinct and ability to care for themselves. The little Hardwicks are like them, even wilder, with coarse, stiff, hairy wool, and with instincts too much for wild nature, who tries in vain to snow them under on the mountains of Cumberland and Westmoreland. Maybe these are like the original wild sheep, which must have come first from the mountains.

In truth, what changes have been wrought in sheep! Once active, hardy, able to escape wolves and even panthers in some way or another, they are now prey to even small dogs—that is, most breeds are. Once coated with sufficient woolly hair to protect them from the cold, they are now burdened with prodigious fleeces, the very weight of which bears them down. Withdraw from the sheep of the world man's protecting hand, what would be the condition of things in ten years?

There would be probably a few flocks of Cheviots, some Dorsets, maybe; perhaps some Welsh mountain sheep, some Hardwicks, and doubtless some Scottish blackfaces. No Merino would survive; the Southdowns might—who knows? But nearly the entire sheep population of the world would be swept out of existence in a very few years were man's protecting hand withdrawn.

How much has the sheep improved within historic times? No one knows. Before history was written women wove fine woolen apparel. Doubtless the sheep now shears a far heavier fleece than it did then. Doubtless the form has been helped by selection. Within a century the finishing touches have been given. Has the end come? Very nearly, in the judgment of the writer. Already there is a turning backward by practical breeders who make mutton. The Shropshire, most perfect of breeds, is losing favor in Shropshire land, and Kerry Hill sheep are said to be displacing them as farmers' flocks kept as market flocks solely. The Kerry Hill sheep are not nearly so handsome as the Shropshire, but they have been kept for hardiness, good feeding, and suckling habits. So it goes. Breeds reach "perfection;" they receive fine finish; through inbreeding or some other defective mating they lose in stamina and hardiness; then the neglected breeds come to the top again.

But how much has the sheep and the shepherd changed since history was written? Hardly have they changed at all. Once a young man, Egyptian, born of desert heritage, fled from an Egyptian city, from police and officers of the law; out into the desert he fled, and at last reached a ranching country, with many sheep in small bands and many shepherds. Beside a well of water he sat and brooded his fate and wondered what the future had in store for him. As the sun dropped low over the yellow desert hills little flocks came in to the well to water; came from right, from left, from in front of you and from behind you. Each flock had its shepherd. They approach, and each one draws water and pours it in the stone trough, while his parching flock draws near, and eagerly the sheep slake their thirst. Some girls draw near; one tall, almost a woman grown, yet with timid, hesitating, girlish grace; the other younger, more slender; each one bearing rich color in face and arm—browns that deserts love, reds that hint of wild desert bloom, eyes that are like quiet pools under overhanging rocks. Their sheep follow them eagerly; they take their place and begin drawing water. When only a few have slaked their thirst come other shepherds. Strange, selfish, piggish young men and half-grown boys, in whose breasts as yet has not awakened the flame that love kindles; they see naught in the two girls but rival sheep tenders. They drive away their flocks; they rudely take away the rope and water bucket; they hurl coarse, unfeeling jest and ribald remark. The girls, ashamed and affrighted, are about to go away, leading their reluctant flock, but the tall Egyptian stranger sees it all. He arises, comes forward with easy grace and courage; he bows to the girls, speaks one word of comfort, hotly rebukes the intruding shepherds, cuffs one, takes the rope in his own hands, and draws water for the flock till the last lamb has had its fill. Then, with courteous, low-sweeping bow, he retires again to the shade of the date palm, and the girls, wondering and looking backward, take their flock and go homeward. Behind the square house of adobe bricks is a little corral of thorn enclosure. Here the flock is penned. Then the father, astonished, asks:

"Why, daughters, how come you home this early?"

And the girls eagerly reply:

"Why, Father, such a wonderful thing happened at the well. A stranger, an educated, courteous, beautifully dressed gentleman, came and drove away the rude shepherd boys when they would not let us water our sheep, and himself drew the water till every lamb did drink."

"Where, then, is this stranger now?"

"We left him sitting under the date palm beside the well."

"And bethought you not what courtesy is due to a man who has done this much for you? Fie upon you! Go at once, I command you" (to the older daughter), "and bring him home with you, that I may thank him and that he may break bread with us."

Demurely the maiden goes down the warm trail; demurely she salutes the grave but handsome stranger; she repeats her father's command; the man arises and smiles, bows acquiescence, and together, she in front, they go up the trail to her father's house, a strange commotion in her maiden's heart, a new, strong throb in his. For forty years this young Egyptian abode in that house; he married that girl; he cared for the flock. And there, on the slopes of that mountain, he stood and dreamed of a people in slavery, his people, his brethren, dreamed of their strength could they be united, dreamed of leading them away into the wilderness and through the desert to a land of which he had heard, a goodly land, where rains fell and grass was good and cows came lowing to their calves with swelling udders, and flowers there were with bees that stored honey in the rocks. Thus was born within young Moses the idea of delivering his people, Israel.

The same life exists in exactness to-day. I have seen the scene enacted over and over in desert lands. In Mexico one can see it; in Arabia, in Palestine. Men come, men go; sheep come, sheep go; but the life of the sheep and of the shepherd in the deserts, where first sheep were made man's companions, goes on, the same yesterday, to-day and forevermore.

It Was Good Enough for My Father

By Bruce Barton

OLD October's purt' nigh gone,
And the frosts is comin' on
Little heavier every day—
Like our hearts is thataway!
Leaves is changin' overhead,
Back from green to gray and red,
Brown and yeller, with their stems
Loosenin' on the oaks and e'ms;
And the balance of the trees
Gittin' balder every breeze—
Like the heads we're scratchin' on!
Old October's purt' nigh gone.



Photo by Frank M. Hohenberger, Nashville, Ind.

Old October

I LOVE Old October so,
I can't bear to see her go—
Seems to me like losin' some
Old-home relative er chum—
'Pears like sort o' settin by
Some old friend 'at sigh by sigh
Was a-passin' out o' sight
Into everlastin' night!
Hickernuts a feller hears
Rattlin' down is more like tears
Drappin' on the leaves below—
I love Old October so!

—*By James Whitcomb Riley.*

A NEIGHBOR of mine in the country stopped by one day when we were making some changes in our house. He climbed down from his buggy; and, being glad of a chance to loaf a little, I quit work to talk to him.

"Going to put all those three bathtubs in one house?" he asked incredulously.

I told him we had figured it didn't cost much more to have all the bathtubs we wanted, while we were about it.

"Going to have a furnace too, I see," he added.

I said we were.

When he spoke next there was a certain condescension in his tones, as if he realized we were making a mistake and would like to have saved us from it.

"I never went in much for such things," he said. "I figure my place was good enough for my father and it is good enough for me."

As he drove away I got to wondering how much of the world's failure to progress can be attributed to that unhappy phrase.

I have attended town meetings where it was the stock argument. Why make improvements? Why be so dissatisfied with the roads, or the water supply, or the schools?

All these things have been so in the past; our fathers managed very well with them; why should their children want anything better?

The answer to that argument, it seems to me, is that every man who amounts to anything ought to feel a sense of pride in leaving the world at least a little better than he found it.

Some men, like Clemenceau, and President Wilson, and Lloyd George, have the magnificent opportunity of lifting all civilization to a little higher plane.

Other men leave nobler cities as a record of the fact that they have lived. Sir Christopher Wren was one of these. The fire that wiped out London in the seventeenth century was a blessing in disguise, because the genius of Wren created a finer and more lovely London in its stead.

Most of us work neither with civilization, nor with cities. Our influence is confined to a little town, or a few acres of land, or a single household.

These are our kingdoms, and the fact that they are small ought not to excuse us from the obligation to improve them just as much as we can.

When I get to the end of my life I would like to be able to check over the record and say:

"At least I'm leaving my land a little more fertile than the previous owner left it. I've put the house in such shape that it will stand for fifty years. And every time a proposition has come up that would improve the town, I've helped it along. To this extent, at least, the world is a better place because I spent a lifetime in it."

Elijah in one of his periods of dejection went over into the woods and sat down under a juniper tree. And he prayed that he might die.

"It is enough; now, O Lord, take away my life," he prayed; "*for I am no better than my fathers.*"

His notion was that when a man is content to be no better than his fathers he might as well be dead.

And there is considerable to be said in favor of that proposition.

"You Will be Happier on the Farm Than Anywhere Else"

By Joseph E. Wing

THE Constitution of the United States, I believe, declares that every man has an inalienable right to "life, liberty, and the pursuit of happiness." I am glad that it specifies the pursuit of happiness. That means much. I have pursued happiness as a farmer, and I have found it—in *hard work*.

I do not believe that any man who doesn't work with his muscles *and* his mind can ever be truly happy. Therefore I believe that the farmer has the best chance for happiness of any man in the world. And I believe that, though he may not realize it, he *is* the happiest man in the world.

You ask why I think the man who has to work hard most of his life is the happiest. I will tell you:

Now, how are you to obtain happiness? The old saying was, "Be good and you will be happy." Some have improved on that by saying, "Be good and you will be lonesome." Really, rather than saying "Be good and you will be happy," you can more truly say, "Be *happy* and you will be good."

I can reform the world if I can make people happy. Happy people don't steal, kill, fight, or quarrel.

Pleasure and happiness are forms of action. The old idea that they are forms of rest is absurd. *Pleasure comes from successful effort.* The football player is happy when he makes a good play, when he feels the conscious strength of perfect manhood, when every muscle is joyous; but he feels also the pleasure of an active brain directing the muscle, the pleasure of knowing, too, that others are watching and approving. He is in action. The horse putting out his every effort to win the race is happy at that time. I do not pity him, even if he dies in the effort. Pity rather the poor brute destined to die a prisoner in his stall, surfeited with food for which he has no use, dull, stupid, half-dead all the time. He gets no chance to *work*.

I am glad that every one of you on the farm has his or her work to do in the world. I am glad that none of you are born with silver spoons in your mouths. What a fate to be rich, to be sheltered from exertion, to ride always and never know the delights of walking, of wrestling with the Western gales, of proving your own manhood and feeling your own powers. To be always fed to satisfaction, eating when you are not hungry, drinking when you are not thirsty! What a horrible fate! Why, the most unhappy people in America are riding in palace cars to-day, eating in gilded dining-rooms, waited on by liveried footmen.

At the table where I used to sit at the boarding house the lads were always grumbling at the food served them. Now, that does not mean much—it is a habit, very largely, and does not count; but I want to illustrate a point. The trouble was they found that food prepared for them by someone else. Now, if they had first felt hungry, then went out and hunted up the materials and prepared for themselves the very same food that they grumbled at, it would have given them pleasure, it would have tasted good, they would have relished it if it had been only half as good. They would not have grumbled, nor would have let anyone else grumble at it. I know what it is to get hungry, to go out with a gun and shoot a rabbit, to dress and cook it, to bake my own bread by the camp fire, to sit and eat it, serving myself and comrade—and that meal was sweet. Because it was the direct fruit of my own labor, that's why.

I do not think that God meant a curse when he said that you must earn your bread by the sweat of your brow. The very fact that you did sweat is a sign that He had put energy in you, that you were employing that energy, therefore were happy while you were earning that bread; and then when you have wiped away the sweat and sit down to eat the bread, what pleasure it gives you; how sweet it is! I tell you there is nothing like earning the bread, to sweeten it. And to marry a wife while you are yet earning the bread, to let her share the labor with you, together to earn and eat the fruit of your labor, that is the sweetest thing of all. You make a great mistake if you wait to make your fortune before you marry.

But in the world's work, what are you going to do? Now, I do not know that it so much matters, so it is honest endeavor. There is a class that seeks to prey on the rest of mankind. Of course, you will not become one of that class. There is another class that seeks soft jobs, for a field where the bread comes easy, the sweat does not start much. I have nothing to say to these men either, only I pity them, for I know that their joy will never be full. But for you who have chosen to do manly things, like men, I am glad, for I know what happiness will come to you after a while.

Often a fellow becomes lonely in the early days of his young manhood. He feels that the world was made before he had anything to say about it, that all the places are filled, that he will have a hard time to push his way into anything. He feels that he is almost an intruder and no one wants him. Let me set his mind at rest there. The whole world is looking and waiting eagerly for young men who "know how." That is the secret, the world wants men who know how, and who not only know how but are also willing and trained to do things. If you have not found your place yet consider whether "you know how;" maybe you had better go where they do know how, and work there a time for nothing, just to learn. Then see if the way is not open to you.

I had a friend who did more for me perhaps than anyone else who ever lived. And all he ever did was to give me chances to work, to do things. He has befriended many other men in the same way. They lived to bless his name. When he died I think more young men were saddened, more felt that they had lost a personal friend and helper in him than in any other man I ever knew. Yet he had only got them places to work, and given them the help of his advice, now and then. He directed *us* to the right kind of *action*.

I think the surest road to success in the world is to give. The way to get is to give. "Cast your bread upon the waters and it shall return to you" is as true now as it ever was. The successful man is the man who gives much. The failure is the man who is fearful to give, lest he be not repaid. The young man who takes not too much thought of time or effort, who pushes his employer's interests, who works sometimes after hours, if it is necessary, or does his work a little too well, is the one who is promoted or taken into partnership. It is the man who is afraid to do too much who remains all his days a laborer. It is the merchant who gives bargains, who gives honest weight, honest change, courteous words, who finally dies a merchant prince. It is the man who gives kind words and thoughts and smiles who gets the priceless treasures of friendship. If you would be loved you should love much. And love itself is a form of energy.

But what are you going to do? I don't know that I would think it necessary to map out my whole future life at one sitting. Man proposes and God disposes, you know; yet it is well to have a general line of action ahead of us. I know that I always had one ambition—to build up Woodland Farm. All my life it has been my ideal to see that old place blossom as the rose. I dreamed of it by night and by day. And it never occurred to me to make a speculation, to "fix it up to sell." No, when I laid the drains I did it hoping that they would last for my boys' time. When I planted a tree I thought of how perhaps my grandchildren would climb it after apples, or walk beneath its shade. When I was hauling our odorous manures and spreading them on the hillsides I did not smell the manures, but the clovers that were to grow there instead. My ideal was high. It has been in a measure the mountain top, that, as you climb the long trail, constantly recedes before you; but I can see that I am gaining, for as I look back it is so far below to the foot of the trail. It is well enough to start to climb a pretty high hill when we begin to climb, for the fun *is in the climbing*, in pressing the earth beneath your foot with joyous muscle, in breathing the sweet mountain air in great, long breaths. And some day the mountain top will stand still for us, and we will come out on top. It is only a question of faith, of *continuous effort*, and of starting to climb where it is possible to climb. It is sometimes wise to ask old mountaineers about the trail.

Now, I have great faith in the future of intelligent agriculture, and in particular of intelligent and consistent effort in live stock, breeding and keeping. People are demanding more and more meat, too. The field is getting more and more inviting. There is a greater demand each year for young men who know how to take care of herds of pure-bred cattle and flocks of sheep. There is no doubt at all of the brightness of the outlook. Yet one must be prepared for storms now and then. It won't be all sunshine. It is necessary to have faith. It is wise to go in debt a little, for it stimulates you to effort to go in debt. I mean for things that you really need, like a little land, or a barn if you have none.

It is wise to consult your wife before you go in debt at all. And for the man who goes in debt for luxuries, for things that he ought to have earned before he enjoyed, there is nothing ahead but well-deserved failure. Yes, there will be storms ahead. You need that faith that lets you work right on. And that means that it is well to study your condition and map out a road to follow, and then follow it consistently. We began ten years ago to try to feed lambs on Woodland Farm, and to grow feed for them, and to build up the farm. We have been doing just that thing each year since. We have not varied our practice much at any time, and, in spite of occasional bad seasons, it has paid us well. It has paid us better than we expected. The things in which we have failed have been a help to us. We have been able to start on the foundation of knowledge gained by mistakes, and build up from that a successful practice.

The difference, often, between the successful man and the failure is that one takes his failure as a basis to build upon, the other takes failure as sufficient ground for giving up and quitting in disgust. It is the man who is a stayer who succeeds. It was General Grant who said, "I propose to fight it out along this line if it takes all summer." A genius might have succeeded quicker by change of base, but he would very likely have failed entirely. Fight it out, then, along the line you start in on. First look the ground over and start on a reasonable line, then fight it out and hold every foot of ground you gain.

There are some things I will mention that will help you: The use of an alarm clock—how few there are who know how to use one! My room-mate one morning did not hear his alarm, and overslept. That was really a mercy, for he did better work all the day for the extra half-hour of sleep. Use an alarm clock by all means, but set it to go off at a certain hour in the evening, and when it goes off go to bed. When you waken in the morning get up. There is a fortune in that idea, if you will follow it up. Don't squander your young strength in staying up at night, not even to read or study. Respect your own body. Keep it clean without and within. It is the temple of the Almighty. Without a sound mind in a sound body you can't do much. Use will strengthen you, but overwork or idleness, either one, will debilitate you. Bear in mind that you can [CONTINUED ON PAGE 59]

Williams: the Man Who Never Had a Chance

OUR neighborhood comet, Tom Williams, has just made his periodic return and camped with his covered wagon and dog tent beside the rock quarry where he has a job.

In spite of his human failings I like Tom, so I went up and visited with him Sunday afternoon. We had not talked long when he fell into his favorite topic.

"Yes, sir," he said; "I could have come back here a rich man if it hadn't been for my wife. There was a fellow down South invented a wire stretcher and offered me a half interest in it if I'd pay for the patent. And just when I was about ready to cash in on it the missus balked."

"Why, Tom," his wife protested, "you couldn't have raised the money without selling the mules; and I didn't want us and the kids to be set afoot on the slim chance of making something out of a contraption you'd never been allowed to see, but had to take a stranger's word for."

"Oh, well," he growled, "of course you couldn't see the point; but it just meant the difference between a home and a car of our own, and this job in the quarry!"

And pretty soon it was another case.

"Yes, sir," he said; "I did a little mining while I was down South, and if it hadn't been that my pardner lost his nerve and quit me I'd have made a big thing out of it. This makes five or six times I've been done out of a fortune that was right under my fingers because my pardners quit on me."

"You ought to try it alone," I advised.

"I think I'll do that next time," he declared. "But no doubt if I do the wife will growl and fuss at me until I have to quit just at the wrong time."

I smiled inwardly as I noted how his trained mind always spotted in advance an opening to load the blame on somebody else. And I remembered different opportunities he had told me of in the past that had been wrested from his sturdy grasp by the shortcomings of others: One where he had gone into the hardware business with an uncle—who furnished all the money, by the way, but whose surly disposition drove away trade until they were forced to the wall; another where his brother dissuaded him from buying a place that finally developed into one of the greatest poultry farms in the State; and still another where he had a worthy ambition and a mighty plan for reforming politics, but the powers had not the foresight to elect him to the legislature.

> YOUR thousand pretenses for not getting along better are all nonsense; they deceive nobody but yourself.
>
> ABRAHAM LINCOLN.

We were sitting on the wagon tongue as we talked, and the little Williams boy was playing some ten steps out in front. In his desperate struggle with an unruly stick horse he got his legs tangled and stuck his curly head into a sand bank. With a bound he was on his feet again and snarling toward his father, who sat calmly whittling and looking on.

"Now look what you made me do!" he screamed. And I thought to myself: "There's Tom Williams in miniature. By and by somebody is going to steal all the opportunities from him too, and he, like his father, probably won't realize that it's a chap by the name of Williams who does it. He is getting a poor start toward learning the vital lesson that if your life is a failure it is invariably your own fault."

FRED L. LAWSON.

If This Law is Changed You Must Pay Higher Interest for Your Loans

By Judge Charles E. Lobdell

Member of the Federal Farm Loan Board

NOTE: Judge Lobdell is a Republican member of the non-partisan Federal Farm Loan Board. He was born and brought up in Kansas, and has lived his life in a farming community, and understands the ins and outs of farming problems. He is peculiarly well fitted to talk on the subject of farm loans.

It might do a great deal toward heading off the proposed change in the Farm Loan Act, which will put a tax on farm loan bonds, if you and every other reader of FARM AND FIRESIDE would write a letter to your Congressman and Senator and send along a copy of Judge Lobdell's statement for his consideration.

THE EDITOR.

AS THE law stands now, farm loan bonds issued by the Government to raise the money with which to make loans to farmers at a low rate of interest are exempt from taxation. There is a movement afoot among certain interests to change the law so that a tax *will* be placed on these bonds. If this is done you will have to pay a higher rate of interest for your farm loan.

I do not think these bonds ought to be taxed, because I do not think you farmers ought to have to pay a higher interest rate on your government farm loans than you pay now, which is a little less than four per cent over a long period of years. So I am going to tell briefly what the situation is and what you can do about it:

When any group of men seeks a change in a certain law it is well to find out who they are and whether they have an interest in the proposed legislation apart from the interest of the general public.

The only agitation for the repeal of the tax-exemption feature of the Federal Farm Loan Act is being carried on by the Farm Mortgage Bankers of America, and at their expense. Who are the Farm Mortgage Bankers of America? A group of wealthy, well-organized, highly efficient and personally honorable gentlemen who are and have been for years engaged in the business of making and selling farm-mortgage loans, realizing therefrom as a rule an annual profit of from two to four per cent, that being the annual difference between the rate received by the investor and that charged the borrower.

When a law like the Federal Farm Loan Act cuts into a man's income it is easy for him to find a patriotic motive for opposing that law, and the fact that the Federal Farm Loan Act fixes the maximum difference between the rate charged the borrower and that realized by the investor at one per cent per annum, and the further fact that large numbers of 8 and 10 per cent loans controlled by members of the Farm Mortgage Bankers of America have been refunded into 5½ per cent loans through the federal land banks, may possibly, although quite unconsciously, have influenced the Farm Mortgage Bankers of America to start their campaign.

In discussing whether you farmers are entitled to the tax exemption on the bonds issued by your banks, let's reflect on what the Farm Loan System really is:

It is not a paternalistic organization. It is not a system of government loaning. It is a plan for the betterment of the farm credit of the country—a plan to build it up into borrowing organizations sufficiently strong and big to entitle them to credit equal to that of other industries equally big and of equal public utility. To this they are entitled because they have the best basic security on earth.

These organizations are to be ultimately owned by you farmer borrowers yourselves, but operated always under such government supervision as to guarantee the soundness of their operations and the integrity of their securities. It is true that a large majority of the stock at first was subscribed by the Federal Government, but the law contains provision for the entire repayment of that stock so that you will own and control it, and such repayment is already well under way.

It is true that the law provides for the payment of the expenses of the Farm Loan Board, registrars, and examiners by the Government, but the progress of the system to date warrants the statement that in the almost immediate future your farm loan banks can assume this burden, thus putting the Government out of it on this point.

Federal land banks operate upon a fixed basis of income, and the excess of that income over expenses and reserve goes back to the borrowers in the form of dividends. Already two of the banks in the territory where interest was originally highest have declared dividends, and three others will do so this year. So, you see, the Federal Farm Loan System in its ultimate purpose, which is fast being accomplished, is a mutual organization owned by farmer borrowers, operated by farmer borrowers under the supervision of the Government, and primarily for the benefit of farmer borrowers.

The Federal Farm Loan System is not a partisan creation. It received its first government recognition from President Taft; it received in its passage the votes of practically all the members of both houses of Congress; the board which administers it is required to be bi-partisan; and the Secretary of the Treasury being the fifth member, the majority of such board is always in political harmony with the Administration.

After finding out what men want to change this system, the next pertinent inquiry is, what would be the result?

The results of the Federal Farm Loan System to date have been to equalize and stabilize the rate of interest on farm mortgages. The uniform rate made by the federal land banks throughout the country is 5½ per cent; this effected a reduction of from 2½ to 4½ per cent in many sections of the West and South, and it is especially interesting to note that many of the farm mortgage bankers who were charging 8 and 10 per cent in those sections, because of what they declared an extra hazard, are now finding that they can safely loan at 6 and 7 per cent.

Rates on farm loans have remained practically the same throughout the financial stress of the war, though we saw wide fluctuations in rates to commercial and industrial institutions, and we have witnessed, for the first time in the history of the country, the remarkable condition that the farmer was able to borrow money cheaper than the railroad. This would seem to be a result worth while to the farmer at least, if not to the farm mortgage banker. This has unquestionably come about largely through the tax-exemption feature of the federal farm loan bonds.

What would be the result if that exemption were taken away is of course problematical. But as I write I have before me the April 1st offerings of one of the oldest, best-established, and most reliable investment banking houses in the country, and note that the federal farm loan bonds are offered to yield slightly under 4½ per cent while railways and industrials, including such high-class industrials as the Anaconda Copper Company, are quoted as yielding from 6¼ to as high as 7 per cent. It would seem safe to assume that if the tax-exemption feature were taken away from farm loan bonds these bonds would have to be sold to yield the investor as good a rate as high-grade railroad securities, the average of which, from the circular quoted, would be above 6 per cent. If to this we add the one per cent allowed for the operating expenses of a federal land bank, or the two or more per cent charged by the farm mortgage bankers, it is easy to see, in the language of the street, where the farmer would "get off."

It is evident, therefore, that the question is not open to argument from your standpoint. Now, are you entitled to the exemption? Certainly not if it is a special privilege and you alone are the beneficiary. The farmer has never thrived by privilege, does not believe in it, and does not ask it.

Do the two hundred millions of farm loan bonds now outstanding (and the estimated output of from one hundred to one hundred and fifty millions per year) constitute a large part of all securities enjoying tax exemption? No.

The campaign of the farm mortgage bankers lays special stress on what they call the loss to the Government because of the possible accumulation of these bonds in the hands of persons of great wealth, who thereby escape a surtax.

What are the facts? First, there are in existence in excess of four billions of dollars of municipal bonds issued by the States and towns and cities of the country. These bonds too are exempt from every form of federal taxation, and where the "male-factor of great wealth" has one opportunity to buy a farm loan bond and escape surtaxes he has twenty opportunities to buy a municipal bond. In addition to this there are in circulation government bonds entirely exempt from taxation in amount approximating two billions of dollars, which give the same party ten opportunities to buy a government bond and escape surtaxes where he has one opportunity to buy a federal farm loan bond.

And as finally quite exploding the theory that the little issues of federal farm loan bonds have affected the market for Liberty bonds, the Government has just sold to the public four and a half billions in bonds, which may, at the option of the purchaser, become tax-free on a 3¾ per cent basis.

The farm mortgage bankers have been entirely silent about this volume of tax-exempt securities, possibly because it doesn't interfere with their business. But these are not the only tax-exemption privileges granted by our recent revenue act. The mortgages held by mutual building and loan associations, which at present aggregate in excess of one and three-quarter billions of dollars, are by the terms of the Revenue Act especially exempted from its provisions. The farm mortgage bankers have not criticized this exemption. It doesn't interfere with the farm-mortgage business.

Mutual savings banks enjoy a similar exemption under the Federal Revenue Act. These banks hold real-estate mortgages amounting to more than two billions of dollars. Many of these mortgages represent loans for which farm mortgage bankers have charged the borrower 8 and 10 per cent, and which have been turned into the savings banks at 5 and 6 per cent. The farm mortgage bankers are entirely silent about this.

The stock in federal reserve banks and the income therefrom is exempt from all federal taxation. The farm mortgage bankers are not complaining of this. Most of them are stockholders in national banks and get the 6 per cent dividends which the federal reserve banks are paying, and which dividends are wholly non-taxable.

The four billion and more of municipal securities exempt from federal taxation represent largely the expenses of municipal improvements to make life for the city dweller more comfortable and prosperous. The mortgages held by the building and loan associations represent the home-building efforts of the city dweller.

Does not an analysis of these facts satisfy even the most skeptical that the farmer has not been overindulged in the matter of tax exemption, and that it is absurd to even suggest that the issue of two hundred millions of farm loan bonds has disturbed the market for twenty-odd billions of governments outstanding?

Another New Corresponding Editor for Farm and Fireside



L. E. Call

IN THE August issue we introduced the first six members of our new staff of corresponding editors. And we said then that others would be added from time to time. The first, and, we think, a very important, addition to the original six is L. E. Call of Kansas, who will handle all your inquiries about crops and soils north of Mason and Dixon line. He will also have articles in the magazine from time to time.

It is also interesting to note that Mr. Call is our first corresponding editor west of the Mississippi. One or two of the additional corresponding editors, whose names will be announced later, will be from even farther west than Kansas.

Mr. Call is, of course, a practical farmer, just as all our other corresponding editors are. He practices what he preaches. His sound farming has equipped him also to be dean and professor of Agronomy at Kansas State Agricultural College, and director of the Kansas Experiment Station at Manhattan. He is a native of Ohio, and a mighty fine man in addition to being a good farmer. Ask your northern crops and soils questions of him. Address him, enclosing stamped self-addressed envelope, care of FARM AND FIRESIDE, 381 Fourth Avenue, New York City.

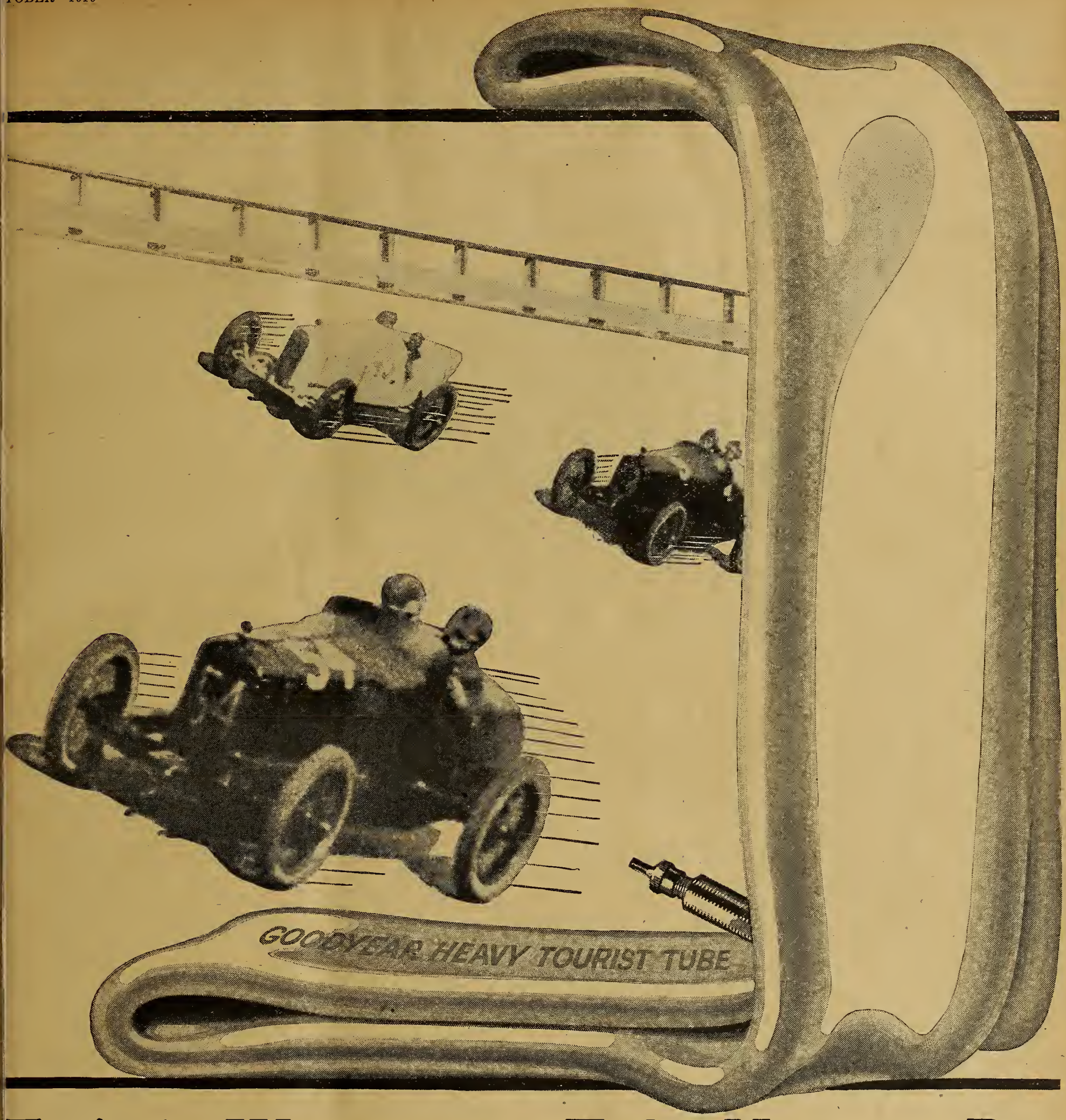
THE EDITOR.

Glass in the Poultry House

By J. T. Bartlett (Colorado)

ALTHOUGH the first sweeping enthusiasm for the open-front poultry house seemed to sound the death knell for glass in the chicken house, more recent developments favor the use of a combination of glass and muslin frames. The open front equipped with muslin frames for use in stormy weather, should occupy at least one fifth of the south wall, but is not used indiscriminately, as in the olden days, by progressive poultrymen.

Practical poultrymen now incline to the opinion that the open front has been much overdone, and so are putting in enough glass to give plenty of light during bad weather, when the muslin frames are up, and also to give more protection.



Think What the *Tube* Has to Do

ALMOST everyone knows, now, that Goodyear Cords are the first choice of the race driver.

For all important track records, from one mile to six hundred miles, have been established by cars shod with Goodyear Tires.

But we wonder how many people realize that this fact is one of the most emphatic endorsements possible for Goodyear Tubes?

No tire, not even a Goodyear Cord, could stand the terrific punishment inflicted by scorching speed unless the tube which it enclosed was irreproachably made.

Goodyear Heavy Tourist Tubes are made of purest rubber—grey gum strips *built up layer-upon-layer* many plies thick, then welded inseparably together into an integral mass.

They are of even heavier construction than usually used in racing tires.

Because of their longer life and their unfailing retention of air, they undeniably do give much protection to casings.

This being true, isn't it essential that *your* tires have the benefit of the finest tubes you can buy?

More Goodyear Tubes are used than any other kind.

GOODYEAR

AKRON

Practical Marketing Methods That Save 300,000 Southern Farmers Money

By W. S. Andrews

I WAS amazed the other day to learn that of the 2,853 county agents helping farmers in the United States, 1,440 of them are in fifteen *Southern* States.

Inquiring further, I found that some of the most wonderful farming in the country is being done in these very States. And, thinking that perhaps there was something in the work there that you and I could use to advantage in our farming, I went straight to the man at the head of the work in those States and got him to tell me about it.

I was not disappointed.

The things I tell here were told me by Bradford Knapp, Southern director of extension work of the U. S. Department of Agriculture, son of Dr. S. A. Knapp, former director, and the man who started the great co-operative farming movement in the South.

Knapp's face fairly beamed while he spoke of the marvelous strides made by these 300,000 farmers with their 7,000 local farm organizations in Arkansas, Alabama, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

There is no close-knit organization of all these units, and they have no common name, but they work together just as effectively as if they had—perhaps more effectively because there is no big organization to wrangle over. When they want things done they just naturally get together and do them. As an example of this, take the handling of the feed situation in the Southwest in 1918:

That fall found the farmers of west Texas and Oklahoma facing the greatest feed shortage in the history of the Southwest. Three successive dry years had baked the fields and dried up the grass and cultivated crops. Practically all of the reserve supplies of hay and grain had been consumed long before. And when you say drought in the Southwest you say a mouthful. It means more than a protracted dry spell means in the Corn Belt.

This year the weather man is giving the Southwest plenty of rain, while the Northwest is having its turn at the dry end of the horn. And there may be a hunch for you fellows of the Northwest in this story.

There was plenty of feed to be brought in from the North and other sections. High freight rates, combined with profiteering all along the line, made the profitable feeding of live stock almost an impossibility. In Fort Worth alfalfa hay was selling for $42.50 a ton, and corn was around $2 a bushel. Something had to be done.

The Department of Agriculture made a tour of investigation, and then Bradford Knapp said: "We've got to introduce a new element of competition here."

A man from the Bureau of Markets was placed in Fort Worth and a campaign of publicity and organization started. Through the county organizations, and aided by the state workers and county agents, the business of importing feed was taken out of the hands of the feed dealers, and was handled in a co-operative way on a very large scale. Banks gave credit, and even allowed the shipments to be consigned to them in some instances. A special freight rate was obtained which practically cut that cost in two. The farmers got their feed, and they got it at reasonable prices.

What did the feed interests do? Many of the smaller dealers went out of business. Some, with real foresight, offered their services to the farmers' organizations, and handled the business of importing and distributing the shipments on a very small commission. The usual charges of graft and manipulation were made against the government officials and the farmers' organizations. The feed interests throughout the entire country were stirred up and apprehensive at their loss of business.

A few figures compiled by the Southern Extension Department show the magnitude of the saving made to the farmers of the drought-stricken areas. There was a total of 6,000 carloads of feed handled in the entire State of Texas, valued at over $6,000,000, and representing a saving to the farmers of $1,155,622, including the saving on freight, which amounted to $259,308 in west Texas alone. There were 4,871 carloads of feed shipped into the west Texas country. Hay was sold for $29 a ton where it had been selling for as high as $42.50.

Over $2,000,000 worth of feed was shipped into Oklahoma at a saving of $10 on every $100 spent by the consumer. Altogether over the entire South, a total of $17,000,000 worth of produce or live stock was bought or sold co-operatively at an estimated average saving to the farmer of $16 on every $100. There were altogether 751 carloads of cattle marketed in this way.

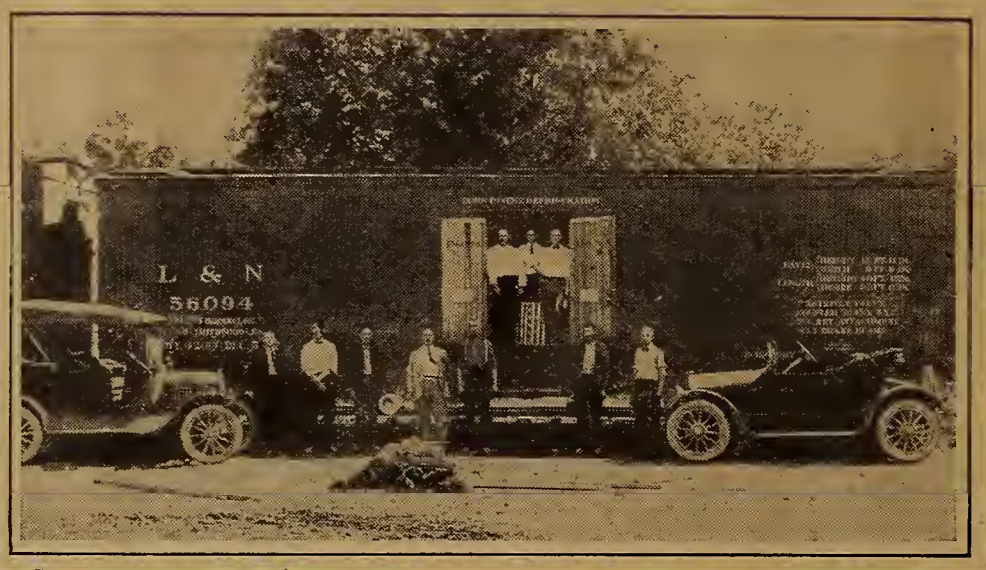
Without previous organization, such a tremendous saving could never have been accomplished. Thousands of farmers would have had a hard struggle for mere existence. Without organization the result of a bad situation would have been much different, and with further organization there seems no limit to the good which can be done through co-operative action.

The growth in the fifteen Southern States, for some reason, has been much more rapid than in the North and West. The farmers down there have demonstrated that it is just as foolish for the Southern farmer to put all his eggs in one basket as it is for his brother in the North. It is just as bad for him to risk his income on one crop like cotton as it is for the Corn-Belt farmer to plant nothing but corn. The elder Knapp started the work independently of the Department of Agriculture, and it was later taken over. In 1910 there were just three county agents, two in Virginia and one in North Carolina. Now there are 1,440 in fifteen States. This is exclusive of the home demonstration workers and the boys' and girls' club workers.

The 7,000 farmers' organizations are not called farm bureaus, although I could not learn why, nor are they organized in a uniform way. In Texas they are called farm councils, and in Maryland, agricultural societies. Obviously the form and name of the organization does not matter, just so it gets the results, which it certainly does.

Co-operative selling is occupying just as prominent a place as co-operative buying. Mississippi is a typical example of how the county organization can assist in solving the farmers' marketing problems. In one locality buyers were paying only $9 a hundred for hogs, while they were quoted in St. Louis at $15. The county agent and the farmers got together and set a day when all would ship their hogs. The farmers with hogs ready to ship brought them in on that day, and they were first carefully graded. Some lively discussions arose when the grading took place. Many farmers learned then for the first time how their breeding and feeding methods compared with their neighbors. That alone paid for the trouble, but when the check came back from St. Louis the price obtained was very much higher than the local buyers had been paying, even after subtracting the freight.

One county agent in Mississippi, O. F. Turner, agent for Carroll County, promoted a scheme by which practically every man in the county raised a pig and gave part of the proceeds from each porker to the Red Cross. The contest started in January, 1918, [CONTINUED ON PAGE 26]



County Agent B. F. Boggs helping with the first co-operative shipment of cantaloupes made by the farmers of Madison County, Kentucky, who marketed $9,000 worth of cantaloupes the first year from this point

The Real Solution of the Farmer's One Great Problem

WHEN we think of American farming we picture it to ourselves as a great manufacturing industry. Six million business men—of whom you are one—are operating six million factories on their farms, taking raw material in the form of seed and unfattened stock, and turning it into finished products for the market.

The only flaw in this great network of factories has been its lack of organization in the marketing end. The U. S. Steel Corporation has mastered its marketing problem. The automobile industry is thoroughly organized. So are the rubber manufacturers. So are the other great industries—all except farming, the greatest of them all.

Now, you farm-goods manufacturers are strong on production, but weak on costs and on distribution. You must build and control your marketing organization just as other great manufacturers do. And you *are* beginning to do that. You have the groundwork for that branch of your business in your local organizations. If you need any proof of it, read this wonderful story. In the nation-wide network of local units which is growing up among farmers we see the solution of the now overwhelming marketing problems you face; and this solution will include solution of the much cussed and discussed "packer" situation.

THE EDITOR.

Drawings by E. W. Kemble



"Couldn't dis chile cut loose' wif close lak dat!"



"Ef you all ain't busy, lil flower pot, I'se gwine ter use you."



"An' I'se gwine ter use dis ole stove pipe too."



"Dis may be style, but how is I gwine ter perambulate?"

A Maxwell Truck you buy this Month will make you a present of its Total Cost in One Year.

More miles per gallon
More miles on tires

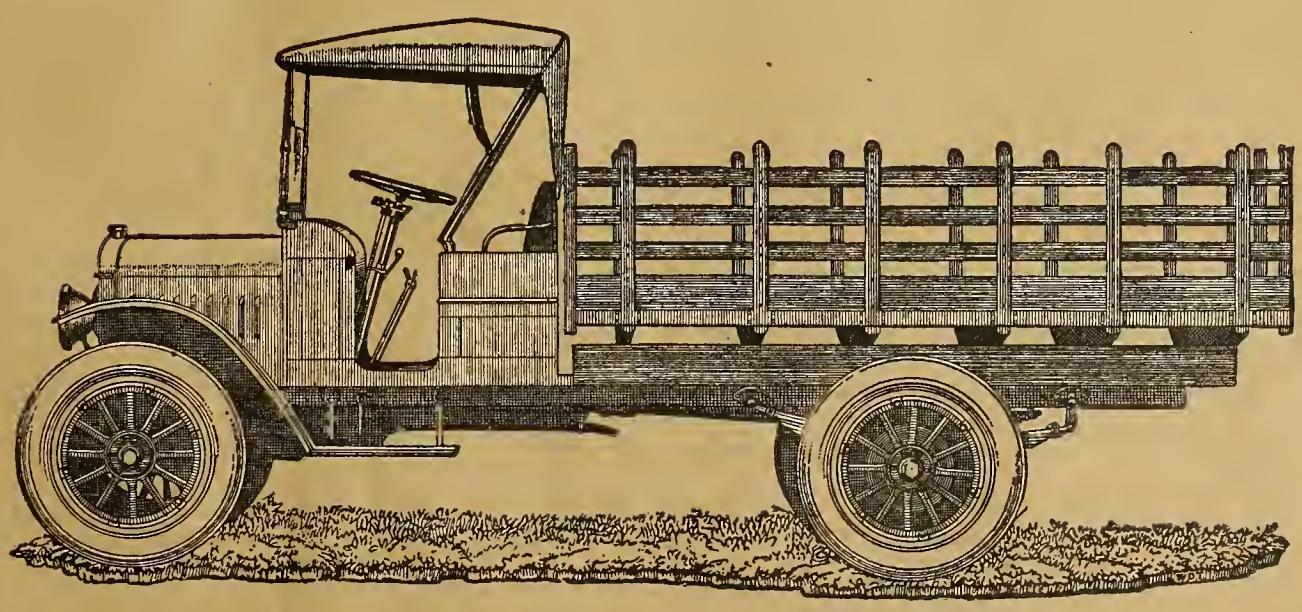
FIVE-thousand-dollar truck construction. Five-thousand-dollar truck guarantee. Worm Drive. 10-foot loading space. Electric lights and generator. 2400 pounds—we built it right to get it light—to save tires—to reduce gas consumption—to climb hills—to take bad roads—*and to keep repair bills down.*

For long hauls and short calls. Self-supporting. Amateur proof. Chassis $1185 f. o. b. Detroit.

If you like, take your time with the payments and let the Maxwell buy itself on the run.

Pays its way from day to day.

MAXWELL MOTOR COMPANY, Inc.
DETROIT, MICHIGAN



How I Get and Keep Farm Help

Readers of Farm and Fireside tell how they solved this great farm problem

First Prize

Winner: R. B. C., Springfield, Vermont

MY METHOD of keeping a hired man gets him for me, and I keep him because I pay him something else besides wages; for when it comes to wages alone the farmer cannot compete with shop and factory.

About twelve or thirteen years ago I had a local boy working for me whose time had expired; when I asked him to stay with me he replied something like this:

"Mr. ——, I'm going to own a farm some day, just as soon as I can save enough money to buy one. I can get more money in the machine shop than you can afford to pay me, and I figure that I can get my farm about two years quicker in that way."

Of course we argued the matter considerably. Then I did some deep thinking, and finally made him the following proposition, which, with few changes, has ever since been my way of getting and keeping hired help:

He agreed to work for me for a period of five years at the going wage for a capable farmhand. During this time he was to save what he could, and when his time was up I agreed to buy a farm of his choosing. I also agreed to help him get the equipment necessary to give him a working start.

Well, at the end of five years he had about $800 in the bank, and we bought a $2,500 farm. I then helped him borrow about $800 more, which, with some stock, etc., I could spare from my own place, gave him a pretty good start. This was the best I could do then, considering my own financial condition.

He of course paid me interest on my investment, and a part of the principal each year. Although he is yet somewhat in debt, his present worth is around $4,000 or $5,000.

The second man stayed with me only about a year, having an unexpected opportunity to better himself.

The third man worked out his time, and is now working his $3,000 farm and getting along fine. This time I had some profits to invest in helping him—certainly a much better investment than "wild-cat copper," etc.

The fourth man had to do his part in the war, but is now back on the job, and will get his farm in about three years.

During all this time I have had first-class hired help. It doesn't cost me any more than other farmers are paying who hire by the month or day. My man has something to look forward to, something to make him think and work for my interests, and when his time is up it doesn't cost me anything to give him a start.

Of course my method wouldn't work with "floaters," town bums, and men who have no ambition beyond their wages; but there are enough of the other kind to supply farmers with help if they are paid the right kind of wages.

I am convinced that the solution of the farm-labor problem lies in co-operation of some sort between owner and help.

Second Prize

Winner: J. N. Glover, Vicksburg, Pennsylvania

IN LOOKING for farm help I try to get a boy or man of whom I know something concerning his habits and staying and working qualities. If he has stayed his months or year where hired before, he is safer to engage than one who changes places frequently.

After learning these facts about the man or boy, I speak to him, and we agree on the wages by the month or year, as the case may be. On my farm of 96 acres I hire a young boy from twelve to sixteen years for six or eight months, and a man and wife or family by the year, and they live on my farm, working with my stock and implements.

He has a good house in which to live, with a good garden, water handy, and fruit trees in the yard. I live in a house at the north end of the farm, and work with the man and boy at farm work when at home.

The boy is paid regularly by the month, and boards and has his washing done on the farm.

For twelve years I have farmed this way, and the boy, because of fair treatment and pay, stays out his time, or until school begins, as they are schoolboys. I try to teach them how to work to advantage so as to save steps, time, and their money.

During these years my boys have all stayed their time but one, and he was lazy, so I was not sorry that he left; but I had one boy for five summers.

In these twelve years I had one man four years, or until he began farming for himself with his own stock, and then I helped him a little in the start.

The second man I have had eight years, and I have encouraged him to learn to do all kinds of work like drilling, planting corn, and running the binder, which he had not been allowed to do before coming to me.

The man I have by the year I pay the middle of each month, when the milk check comes, so he has a regular income. He gets milk daily for family use, butter, half the eggs and chickens produced on the farm, his pork, beef, potatoes, winter apples and cider, wheat for flour, the whole of the garden, sweet corn, and a share of the milk from the cows kept, in addition to monthly wages. Then I pay him for meals for extra hands; he has a team for his hauling, and a horse to drive when necessary; besides this he has house rent free, and firewood for five months.

I try to comply with all my promises in full. He has some children who are able to do work, and I pay them for work done on the farm.

When anything goes on in the county he is allowed a half-day off, like Memorial Day, picnics, or the fair. The family is expected to do the milking and raise the chickens for both his and my family, though I help with the milking in the morning.

We begin the day in fair time, try to do a day's work when in the fields, and quit at six o'clock or before, unless it is a very busy season, as we hardly average more than nine hours in the fields.

By treating help fairly and kindly we have solved the help problem on Willow Spring Farm.

Third Prize

Winner: N. R. Shuster, Frenchtown, New Jersey

THE labor question to-day has become a problem, and in many cases how to get and keep the energetic, intelligent, hard-working man is a conundrum not easily solved.

There are some good, industrious men who can't stay anywhere six months, and are never satisfied with anything—always wanting a change.

There are other valuable men who are always contented with a good home and very reasonable salary; they don't like to move every year, because that is expensive.

There is another class of hard-working, industrious men who are willing to pull heavy loads but want big pay, whether they spend as they go or add to their bank account continually. This class constitutes a big army of laborers; they read the journals, are well posted on agricultural and national affairs; they are not afraid of work, but must be carefully handled if you keep them very long. They, too, are live men, and the ones which make the labor enigma the most difficult.

In getting other than local hands we always put a notice in one or more of our favorite papers, generally under a "want" advertisement, simply stating, "Farmer wanted, married; must be a live, temperate man and well recommended."

We ask for a recommendation from at least the last place or places where he worked, and for such a man we offer good pay, with chance of occasional raises, if worthy and crops admit of it.

Sometimes there is quite some communication before we decide on the party, who later comes to see us. We talk matters over, ask him what he thinks he should have for the work required; and if he is reasonable and does not want everything we take him at his own offer, and as he proves worthy we gradually increase his wages by giving him a share or interest in such things as he has most to do with.

A nominal weekly or monthly pay, with a share in the pigs, milk, grain, or potatoes, creates a special interest in the farm work on the part of the hired man, and has a wonderful tendency to hold him for years.

If the man proves good, after a year or two we give him a greater share, and pay him no regular weekly or monthly salary.

Our man is a young married man from the West. Iowa has the Western system of farming, which does not fit in every particular with the New Jersey system, but we get along well, and he is counting on staying for years.

We give him a good house to live in, a good garden; a day off now and then, outside of the busy pinches, does not mean much to the proprietor, but a big thing for the help. An invitation for him and his family to dinner—Thanksgiving and Christmas or on his birthday—a word of encouragement, approval, or appreciation are splendid addenda which stimulate feelings on the part of the hired man and his family to love and respect his employer.

Let him see that you take him for a man and trust him as far as it is reasonably safe, and that your own word is always straight. Don't find fault with everything; one boss only; very little or no arguing; firm, honest, kind, and liberal treatment every day, and you will find the hired man is a man too, and one who does appreciate a good turn, a good farm, and a good home.





Making Cobblestones into Porches

IT IS wonderful what a little cement and a few hours of spare time will do sometimes with a house. Take the little bungalow shown above for example. The view on the left shows the old house, and the way it looked after the addition of the porch is shown in the right-hand view. One would hardly recognize the two as the same building. The cobblestone porch with the open pergola roof and cement floor and the cement walks were all constructed by the owner, Mrs. George Katzenmeyer, of Bowling Green, Ohio, at very small cost.

Cobblestones were gathered from a near-by field, forms were made of store boxes, and the only expense was that of the cement and the timbers used in building the pergola. A trench two feet deep and one foot wide was dug the length of the wall, and filled with cement and stones and continued up about five feet above the ground. The stones were laid on the outside, and the cement poured in carefully so as to bind them without covering them entirely.

Any farmer can beautify his own home in this manner without the expense of a carpenter or a mason. Roses growing over the pergola and clinging vines on the stone walls make a very pleasing picture, and a good place to cool off on hot summer evenings.

Fourth Prize

Winner: J. J. Boone, Mt. Victory, Ohio

I HAD known Frank for several years, and felt sure he was a good worker and intelligent and honest. I asked him to work for me, and he accepted the offer. That was in the spring of 1915. The farm I had just purchased was much impoverished, and, except for 26 acres of the 132, was covered with inferior timber and not underdrained with tile.

I took Frank on this farm, with not very bright prospects because of the run-down condition of the farm. We started on the co-operative plan; cut off the wood lot and drained it; fixed comfortable buildings for live stock; built a good henhouse, 16x45 feet, plain but substantial; good hoghouse, good barn and cow stable, silo, fixed fences, put tile in other fields, and got a manure spreader. We keep from 8 to 10 head of cows, sell milk to a condensary, their haulers coming to our door for milk. I bought 25 ewes in the fall of 1915, and Frank has largely taken care of them; and this flock, though small, has made us an income of almost $1,000 since purchase. Our cows have made us an income last year of over $1,000; and we sold over $2,200 worth of hogs last year. And the income was almost $5,000 on this 132 acres for the year. This year we have 26 acres to corn, and corn is splendid for crop at this time. We sowed five acres to alfalfa two years ago, which is a success, as we sowed 800 pounds of limestone on this field, and inoculated the seed.

I got Frank because I know him to be a good worker, in good health, and honest. I keep him because I have been fair with him, and made it profitable and pleasant for him to stay with me—so profitable that he can own a small farm, and pay for it, in three or four seasons more.

There never has passed an unkind word between Frank and myself in the five seasons. The outcome has been profitable for me. A healthy, honest, willing, intelligent worker, give him a fair show, co-operate with him, make it profitable for him as well as pleasant, manage the farm as a business matter, and success will result.

Fifth Prize

Winner: Mrs. C. G. Willcox, North Norwich, New York

WE OWN a dairy farm of 153 acres, and on it keep a pure-bred Holstein-Friesian herd of 40 head. It is needless to say that the man we hire to care for the stock must possess qualities not to be found in every "hired man," such as a willingness to be perfectly regular about chores; not to insist on every holiday that comes along; to know and like good cows, and treat them accordingly; and, in a nutshell, not to be afraid of keeping long hours and filling them full of hard, honest work, as farmers must do in these days of labor shortage. Therefore we plan to know a man's habits, reputation, and qualifications pretty thoroughly before we hire him.

But here is where we diverge from the latter part of your question: we do not keep our farm help indefinitely. For instance, the man with us now leaves the first of March next to buy a farm of his own, after the most loyal service with us for two years. He has become imbued with ambition to own a place for himself, with such cattle and horses and tools as he has found in use here. We consider this ambition perfectly laudable, and through experience are of the firm belief that the really extra-good worker will want to be his own boss in due time, while those lacking that natural ambition are second-raters, and not the class of men desired on a high-class farm.

So we consider it good business to inspire our men to buy land, and they certainly give us of their best in the meantime. We house our helper in a neat, modern dwelling with conveniences, and pay a little more than the neighbors do. My husband treats his man as a partner, and assumes that he is as interested in the welfare of everything as we are. This attitude has never failed to bear results; and, while we cannot boast that our men have remained for long years with us, several of them are now proprietors themselves.

Our slogan is: Hire the best, treat him right, and send him away a better farmer.

New Kind of Suit All Wool - $12.85



BOYS are hard on clothes! Mothers know boys will play ball and leap frog, slide down cellar doors and banisters, vault fences and run foot races — and every jump and slide and strain tears and wears the fabrics, pulls apart the seams, rips off buttons. Heretofore, boys' suits quickly went to pieces. You will find the remedy in such clothes as

Boyville

Boyville, a new kind of suit for *your* boy, is designed to stand the strains. It is a suit made of a specially woven all wool fabric—a suit with new strength to withstand the wear and tear at more than twenty points of strain.

This new kind of suit is designed to save you the trouble of sewing up seams, save you from constantly sewing on buttons, sewing up sleeve linings, tacking on belt loops and endless patching and fixing.

A New Standard of Value

Boyville pockets are held permanently in place by canvas stays. Seams are double stitched and taped. Sleeve linings are backstitched to stand months of pulling and tugging. Even the buttons are reamed so that they will not cut the thread.

And you will have no more regrets that your boy is not better dressed. Even in style the *Boyville* is different. It is really two suits in one.

Never before has a boys' suit been made with such wear resisting materials and sold for so little. *Boyville* sets a new standard of values. The *Boyville* with its more than twenty special features of strength, its specially woven all wool cloth—costs only $12.85.

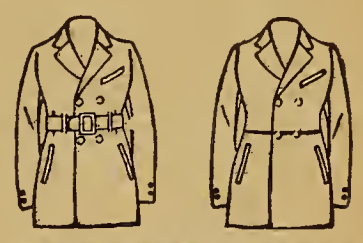
Boyville clothes will look better and last longer per dollar of expenditure than any other clothes for boys.

Backed by Our Guarantee

Into every *Boyville* suit goes the resources of one of America's largest merchandising institutions, now serving, in its 27th year, about one-quarter of all the families in the United States.

There is no better illustration of the advantage of dealing with Sears, Roebuck and Co. than in the perfection of detail and value found in *Boyville* clothes. *Boyville* suits, as well as everything that Sears, Roebuck and Co. sell, are backed by this guarantee of satisfaction:

The service that you have a right to expect or your money returned.



"Boyville" Suit can be worn in two ways—with belt or in the new waist seam style.

The *Boyville* Suit—Price, $12.85

Two-Style Knickerbocker Suit. Can be worn as belt all around model or the new waist seam style. Coat lined with good quality mohair. Pants are full lined. Sizes 7 to 18 years. State size. Shipping weight, 3½ pounds. Your choice of four patterns.

40A1—14-ounce wool cassimere. Color, gray..... Price $12.85
40A2—14-ounce wool cassimere. Color, brown..... Price 12.85
40A3—14-ounce wool cassimere. Olive green..... Price 12.85
40A4—14-ounce wool cassimere. Blue with stripe..... Price 12.85

Boyville Full Lined Pants to Match—$3.85

Priced especially low. Order an extra pair of pants with the suit. Sizes 7 to 18 years. State size. Shipping weight, 1¼ pounds.

40A5—Pants to match Suit 40A1. Price..... $3.85
40A6—Pants to match Suit 40A2. Price..... 3.85
40A7—Pants to match Suit 40A3. Price..... 3.85
40A8—Pants to match Suit 40A4. Price..... 3.85

Boyville Cap to Match—Price, 98c

One-Piece Top Winter Golf Style Cap made of same material as suits. Full lined. Stitched band. Long visor. Cloth lined inside pulldown band. Sizes, 6½, 6⅝, 6¾, 6⅞, and 7. State size. Average shipping weight, 9 ounces.

40A9—Cap to match Suit 40A1. Price..... 98c
40A10—Cap to match Suit 40A2. Price..... 98c
40A11—Cap to match Suit 40A3. Price..... 98c
40A12—Cap to match Suit 40A4. Price..... 98c

If by parcel post add amount of postage according to weight and zone.



Boyville Stockings

Boys' Fine Ribbed, Medium Weight Stockings. Made from two threads of fine quality cotton yarn, with an extra thread knit into the knees and tops. Toes and heels of three-thread yarn. Sizes, 5½, 6, 6½, 7, 7½, 8, 8½, 9, 9½, 10. State size. Shipping weight, each pair, 4 ounces.

77A26250—Black. Price, 3 pairs, $1

Boyville Shoes



Foot form shape, gunmetal finish side leather lace shoe with dull leather top. All leather low heel, leather innersole and counter. Full vamp, not cut off under the tip. Medium heavy sole, Goodyear welt. State size. Shipping weight, 1½ to 2 lbs.

15A375372—Little folks' sizes, 9 to 13½..... Price $3.45
15A374910—Boys' sizes, 1 to 5½..... Price 3.95
15A374123—Young men's sizes, 6 to 9..... Price 4.75



Boyville Blouse

Made of mercerized cotton poplin; seams double stitched. Attached collar has buttonholes on points and pearl links. Two breast pockets. Three-ply open style cuffs with button and buttonhole. Sizes, 6 to 15 years. State size. Shipping weight, 6 ounces.

40A13—Price..... $1.00

If by parcel post add amount of postage according to weight and zone.

Send all orders direct to

Sears, Roebuck and Co., Chicago, Dallas, Seattle

Dollars-and-Cents Ideas I Have Found That You May be Able to Use

By John Roberts

THE 20,000 men and women who work for you and me in the Department of Agriculture have a lot to do. They look after all the agricultural extension work in 48 States, supervise all road-building under the Federal Aid Road Act, take care of our giant national forests on which millions of live stock are raised, run the various national campaigns for the eradication or control of plant and animal diseases and pests, make weather forecasts and warnings throughout the country and at sea, enforce the Food and Drugs Law, the Grain Standards Law, the Cotton Futures Law, the Warehouse Law, the Insecticide Law, the Plant Quarantine Law, and many other laws, the federal game laws, the crop-reporting system, the soil surveys, investigations in farm management, farm marketing, finance and organization, crop and live-stock production.

They have about $30,000,000 a year (the price of one dreadnaught nowadays, as Mr. Daniels likes them) to use in making agriculture better for you and me.

This is too much for any one person to absorb and understand, so I am going to follow the work of the Department down here, sort out what I think will help you farm better. I am going to watch especially for money-making ideas in farming as they are developed in the field. I will give you only practicable stuff that you can use in your own work.

It has been said that the Department is wasting money, that it is full of long-haired men and short-haired women who peep through spyglasses and see very small things with very large names, and that what time these spyglass peepers are not peeping they are writing dull and deadly bulletins in a mysterious language.

I have a suspicion that there are a lot of useful facts here, just the same, if we can strip them down and set them forth in plain language. I won't be able to tell about them in much detail. If I did I couldn't cover much ground each month. But I can give you the ideas, and sometimes tell where fuller information can be obtained. The rest is up to you.

If Your Engine Won't Run

One of the first things I stumbled onto the other day in making the rounds was a little bulletin telling why a gas engine doesn't go sometimes, and what to do about it. The name of it is "Practical Hints on Running a Gas Engine," Farmer's Bulletin 1013, and it's free. There is much truth in its statement that "a man frequently will spend much more time and energy in starting a gas engine to pump water for stock, run a milking machine, or for some other similar purpose, than would be required to do the work by hand." It says that the time lost in this manner in the aggregate is enormous, and that to a great extent it is preventable. Then it tells in a "trouble chart" where the gas engine's common ailments lie, and the remedies. If you have a gas engine get a copy.

Double a Hide's Value

Here's a tip on skinning farm animals that may mean more money in your pocket at butchering time. Just three or five minutes more used in taking off the skin of a calf, or fifteen minutes with a beef hide, may make it worth several times more, Department experts assert. They say the chief reason tanners pay more for packers' hides than for those farmers offer is because the packers take the hides off properly. Farmers usually are careless with the knife, and cut and score the skins badly. Sometimes more than half the thickness of the leather is lost by such defects. Care with the skinning knife, keeping hides clean and free from blood, and proper storage and packing are the essentials. The Department has a new publication which tells how to skin the right way, how to pack the hides, how to store, and how to sell them. Hides are worth real money nowadays, and it will pay you well to learn how to remove them properly. I have a report before me which shows that country hides on the Chicago market increased from $21–$22 on March 1st, last, to $32–$35 on June 21st.

Save Your Horse Feed

Do you feed the little horse the same as the big horse, doing the same work? That isn't necessary. And do you know that the horse working at a trot requires considerably more feed than the one working at a walk? How would you mix a good balanced ration for horses? Is silage a good horse feed? And what about alfalfa—is it too laxative? Do horses need tonics? The answers to these questions are in Farmers' Bulletin 1030.

I'll give you some of them. Yes, silage may be fed, but its use is as an appetizer and tonic fed in limited quantities as a supplement to the regular ration. It should be introduced gradually into the ration. It is very dangerous to feed moldy or frozen silage to horses. Corn silage is the only kind that has met favor as a horse feed. It has a valuable place in the winter ration if fed with care—not more than 10 pounds daily to the animal. Alfalfa is laxative, but it is coming into great favor as a horse feed, and is safe if the amount is limited to one half to two thirds the roughage allowance. The conditioners, tonics, and fatteners on the market have for their foundation simple and well-known drugs and feeds. You can make them yourself if your horses need a tonic. The bulletin tells how.

The Winning Spirit

He was a county agent, and he had just received a letter from an inquisitive and meddlesome clerk in Washington asking him why he had asked reimbursement, in his expense account, for a railway handcar. This is what he wrote back: "Promised to hold meeting at Dry Forks. Cloudburst took out railroad in valley this side. No trains running. Seed-corn man and I took handcar, went as far as we could. Finally had to swim for it. Abandoned car, which was washed down stream when embankment gave way. No rain on other side of mountain. Rousing meeting. Lots of good accomplished. Handcar cheap at the price."

Want a House Plan?

If you are thinking of building a house this fall I believe it would pay you to get the ideas of the rural engineering experts in the Department of Agriculture. They have recently finished a series of plans for farmhouses, including tenant houses, which seem to be very practicable, and the houses are rather good-looking, too. An inquiry to the Rural Engineering Division will bring working drawings free. If you don't want to follow their plans rigidly you can modify them to suit your needs. They also have plans for storage houses, portable granaries, and other farm structures.

Tips on Beekeeping

There are too many people in the bee business, and not enough beekeepers. That's the way the Bureau of Entomology of the Department sees it. They say that we've got more beekeepers now than we need—ten times over, they venture. And then they turn right around and say we need ten times the present number of *good* beekeepers. The reason for that attitude is the plain fact that too many people think they can make a wad at beekeeping without working at it. I don't mean that this calling requires very hard work, but it demands the right kind of attention at the right time. If you're going to be a beekeeper, be a good one. That's the whole thing in a few words. Farmer beekeepers are usually head over heels in other things in spring and fall when the bees need most attention.

The Department has a number of publications on beekeeping. Two of them discuss the preparation of bees for the winter. These are Farmers' Bulletin 1012, "The Protection of Bees for Outdoor Wintering," and Farmers' Bulletin 1014, "Wintering Bees in Cellars." Wintering in cellars is recommended in the colder parts of the country, and packing the hives with good insulating material in protecting cases outdoors is advised for the Central and Southern States. October is the month to prepare the bees for winter in the North Central States.

For the Women

Is the Department doing anything of interest to women? Well, if you mean farm women, I haven't seen much around the Department so far that wouldn't interest them. But putting aside all the strictly farming investigations in which they are becoming more and more concerned and affected, even if only indirectly, aren't they keenly interested in better housing plans, water supplies, better milk and milk products, rural sanitary improvements, enforcement of pure-food laws, control of household pests, gardening and fruit-raising, retail market reports, parcel-post marketing, poultry-raising, not to mention the obviously vital investigations of food and clothing problems, home conveniences, home management, and rural life matters? I will have more to say about these activities later. In the meantime I would suggest that if your library does not already contain the publications of the Department on these subjects you write for them. In its food research work the Department undoubtedly has gone farther than any other American agency. You will be interested especially in a recent series of Thrift Leaflets—twenty in all—issued by the Home Economics Office in co-operation with the Treasury Department. These are four-page circulars, briefed to the limit, but digesting all the information of the federal experts on household thrift. They discuss things that come right home on the matter of cutting living expenses.

Kihn, the Man Who Invents New Kinds of Potatoes



John Kihn

SOME ten years ago John Kihn and his family located on a farm not far from us, a farm not noted then as it is now. He became an extensive potato grower, but, being a progressive man with the right farming spirit, felt there should be better varieties and larger yields.

He started to search his fields for potato balls, or seed which matures on the vines after blossoms, if the disease and insects do not kill them. These balls are small, green, and about the size of a marble.

Only the finest and thriftiest hills are used for seed. When mature they contain from 5 to 400 small white seeds about one-twentieth as large as a tomato seed. Mr. Kihn had his next year's seed in a small pill bottle, and they were so small one wondered how the tiny things would ever find their way out of the ground in the propagating boxes. These boxes were glass-covered to prevent loss by accident to the tiny young plants, which the first year were very small, hardly resembling the potato at all.

The first year they had potatoes ranging from the size of a marble to a walnut. They produced all shapes and many colors, from blue, red, and white to a mixture of all colors. Only those that conform with Mr. Kihn's ideals are saved. They are carefully cured, when ripe, and kept in storage the same as other potatoes. The second year they are again planted in boxes. Those that have kept sound and hard through the winter receive the same attention as before, gaining in size and strength of vine. Any showing disease or lack of vitality are promptly discarded. They are again kept over winter, and during the third season are planted in the ground.

There are sometimes as many as 20 varieties in the testing garden. These tubers grow full size, and must stand the last and most essential test—that of cooking. Only the best are saved at this last test. They must be dry, mealy, white, good flavor, and cook quickly. They are tested by eating while hot, with just enough salt to make them pleasant. Thus the true potato flavor is found. Many that have been carried through the three years of propagating are now rejected as not up to ideal. There are now perhaps 8 or 10 pounds of potatoes to begin growing with.

It still takes at least two years more before this variety can be placed on the market. Mr. Kihn has so far given a five-year test to the following varieties:

First, Geauga Chief, a large oblong potato of the best quality. Rank of vine, covering the ground completely so the center of the row cannot be seen. Our own field last year completely covered the ground, and, as our county agent, M. H. Bartter, said one day, not one of those potatoes should be eaten. Every one should be used right here in Geauga County for seed. Mr. Kihn has an early potato which he calls Early Red, which is a decided addition to the early potato. This potato is large in size, red, cooks dry and white, with very shallow eye. This is a feature noticed on all his fully developed potatoes, and one that always appeals to the housekeeper; for, after all, if it does not suit the housewife it is a failure. His last, and he thinks best of all, is Kihn's Choice. This potato is nearly round, beautifully smooth and white, best of all as to flavor, and cooks perfectly in sixteen minutes. As to growth it is marvelous. Last summer as our county agent and Mr. Wade of the Ohio Experiment Station looked them over, Mr. Wade remarked that those did not look like potato vines. They are more like tomato vines, as thick as a tomato stalk, and about four feet high. As Mr. Wade remarked, "Here is a field of certified seed, if there is any raised in Ohio."

They dug out at the rate of 480 bushels per acre. Mr. Kihn says they are so solid that they weigh four to five pounds over a measured bushel, and are solid clear through. We think that neighbor Kihn has the patience and love of his work, which is necessary to any man's success in anything.

MRS. JAMES LAMPMAN,
R. 4, Chardon, O.



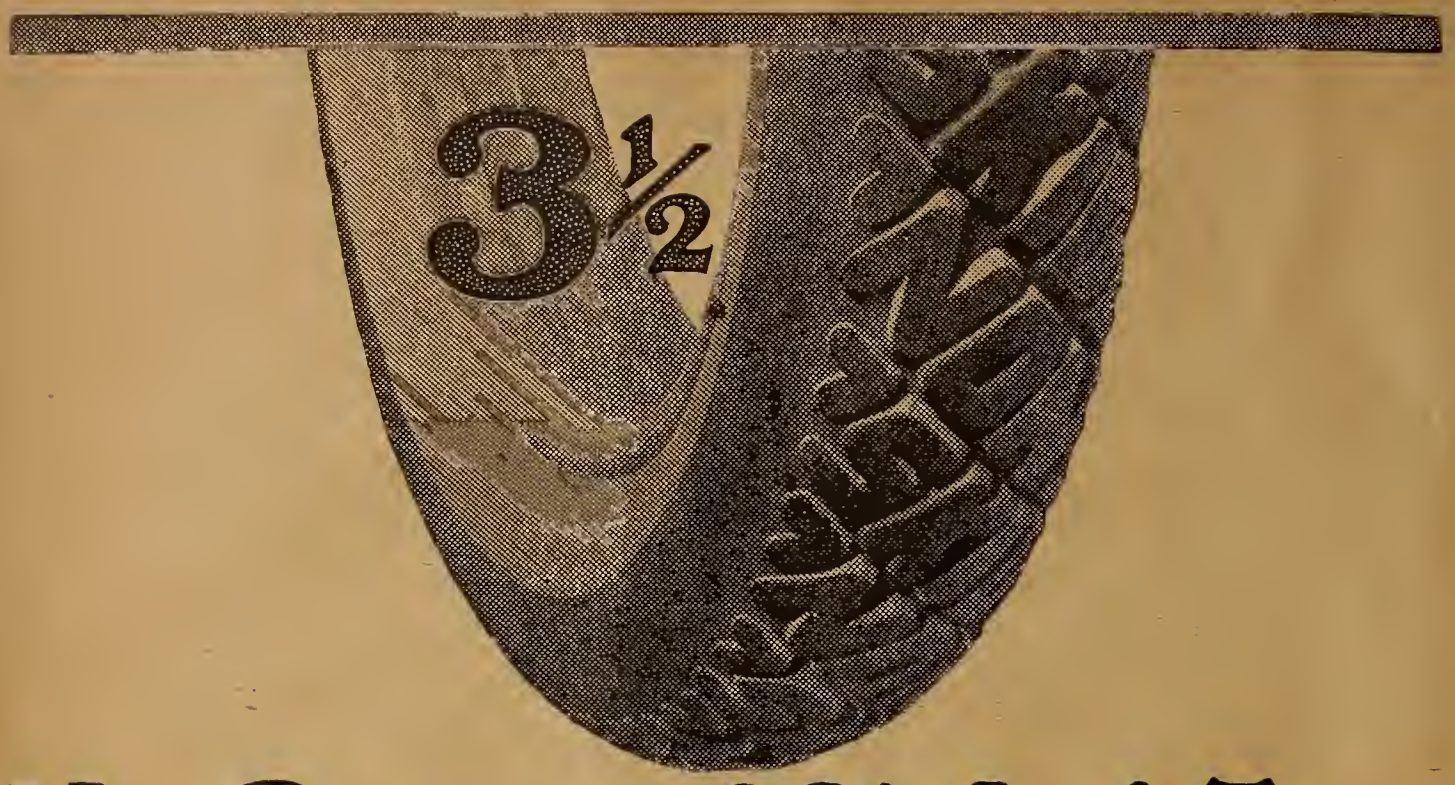
The Comfort Car

A MAN who buys the Hupmobile on the strength of what he has heard of it, is naturally led to expect a great deal from his car.

And haven't you always heard owners of *The Comfort Car* express unusual satisfaction with the way it lives up to its high character!

The reason the Hupmobile has this splendid endorsement is that buyers actually do find it exceeds their expectations in power and performance, economy, and appetite for hard work.

Hupmobile



You Buyers of 3½ Inch Tires

You represent over half the tire buyers of the world. You deserve special consideration. Your volume of demand calls for the biggest value.

Recognizing this, Firestone has built a special $7,000,000 factory for you, designed special machinery for your tire and special looms to weave your fabric.

And this factory is operated by an organization devoted entirely to your requirements. The methods and machinery leave no room for errors or flaws. Result: This special molded tire is the nearest thing to a perfect tire that engineering can give you.

By saving from 10% to 30% on every factory operation, you get this tire at a price that some pay even for the "off brand" kinds. 30x3½, non skid, $18; 32x3½, non skid, $21.

You get a 6,000 mile adjustment basis, and you get it from Firestone—always in the front in value-giving and now years ahead of the field. Any one of the 42,000 dealers who bank on Firestone quality will put these money-saving tires on your car.

Most Miles *per* Dollar

Firestone

ORNAMENTAL FENCE

6 Cents per Foot and up. Costs less than wood. 40 designs. All steel. For Lawns, Churches and Cemeteries. Write for free Catalog and Special Prices.
Kokomo Fence Machine Co. 427 North St., Kokomo, Ind.

FARM FENCE

19 CENTS A ROD for a 26-inch Hog Fence; 27½c. a rod for 47-in. 35 styles Farm, Poultry and Lawn Fences. Low prices Barbed Wire.
FACTORY TO USER DIRECT.
Sold on 30 days FREE TRIAL.
Write for free catalog now.
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FENCE

Direct to Farmer at Wire Mill Prices

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KITSELMAN BROS. DEPT. 271 MUNCIE, INDIANA

My Fence Prices LOWEST

BROWN'S BARGAIN FENCE BOOK

Just write and get my New Bargain Fence Book—see the big money you can save this year by buying BROWN FENCES at my *low factory—freight prepaid prices.* Competition can't touch them. 125,000,000 rods sold proves BROWN FENCE satisfies. 150 styles. Heavily Galvanized—rust-resisting. Sample to test and book FREE, postpaid.
(2) THE BROWN FENCE & WIRE CO., Dept. 121, CLEVELAND, O.

American Fence

Full gauge wires; full weight; full length rolls. Superior quality galvanizing, proof against hardest weather conditions.
Special Book Sent Free. Dealers Everywhere.
AMERICAN STEEL AND WIRE CO.
CHICAGO NEW YORK

U.S. Gov't Barbed Wire!

Buy Now!

FOR a limited time only, we offer highest grade extra heavy 12 gauge barbed wire at less than the cost of manufacture: 4 point barbs 5/8 in. long, spaced 3 in. apart. Coated with best special weather resisting paint. Put up in reels of 750 ft. weighing 58 lbs.

Special Low Prices!

No. 2-SX100.	Carload, 625 reels, per reel	$1.80
No. 2-SX101.	100 reels, per reel	1.95
No. 2-SX102.	50 reels, per reel	2.00
No. 2-SX103.	25 reels, per reel	2.05
No. 2-SX104.	Less than 25 reels, per reel	2.10

HARRIS BROS. CO., Dept. RX-28
35th and Iron Sts. CHICAGO



Learn Auto and Tractor Business

EARN $100 TO $400 A MONTH Right in your own neighborhood. You need only to let it be known that you are a Rahe Trained Motor Mechanic, and you will get into a good paying business at once. We refer you to thousands of successful Rahe graduates—many in your own section.

LEARN IN 6 TO 8 WEEKS Any man, 16 years of age and over, can learn here by daily practice on the greatest mass of Automobile and Farm Tractor equipment ever used for training purposes. Same Method of Practical Training as used to train thousands of Soldier Mechanics, in 60-day Courses. We train you, regardless of education or previous experience. (No colored applications.)

FREE NOW Write today for 7-Day Trial Offer and Big Opportunity Book. State age and occupation.

RAHE AUTO AND TRACTOR SCHOOL, Dept. 2265, Kansas City, Mo.

Those Stupid Folks

[CONTINUED FROM PAGE 5]

rather than the buying end, of this four-dollars-a-bushel game."

At last came the time to dig up the pot of gold at the end of the rainbow.

"How much are you going to hold your potatoes for?" Joe inquired of neighbor Brown, wondering if he would have the backbone to hold out for $5.

"Well," and Brown hesitated a moment, "the county agent says we'll be lucky if we get a dollar a bushel. You see, everybody went potato-crazy this year. This State is simply full of potatoes—everywhere, even along the highway and in the railroad right of way. And Michigan wasn't the only State that plunged in potatoes. So did Maine, Wisconsin, Minnesota, Colorado, and California."

That was enough for one lesson. Joe went home and did some heavy thinking. Potatoes are mighty good food, and nearly every one likes them. The idea that there could be an overproduction of potatoes had never before entered Joe's head.

In a few days the buyers appeared. Potatoes started at 75 cents a bushel. That's what the farmer got; the city consumer of course still paid $4 to $6. But within a week they dropped to 60 cents, at which price the bulk of the crop was sold. Thus Joe learned an important lesson in farming—the fact that the farmer constantly faces the danger of overproduction. He learned the lesson in the capacity of a farmer, not in that of a parlor bolshevik. The lesson gave such a shock to Joe that he started ransacking all reliable sources of information on the subject. He was quite astounded to find that the farmers of the United States, working with a man-power reduced by more than 1,000,000 men, as compared with pre-war times, produced, by the simple process of speeding-up, what would have been a huge surplus of food if we had not exported nearly 20,000,000 tons of food to Europe instead of the usual 6,000,000 tons.

But Joe stuck to farming, and he will succeed. He doesn't require to be knocked on the head but once to get an idea. Incidentally, it is well to remember that Albert and Joe are not the only men who have learned something worth while about farming, from actual contact with farmers and farming.

A few years ago, when the dry-farming propaganda was at its height, as a sort of literary measles, one of the government experts on dry-land agriculture bought several thousand acres in a much-advertised district where there were large areas of land lying out of doors. The government expert had talked dry farming so long and so enthusiastically that he had come to believe in it himself. Many persons seem never to find out that it's a great deal easier to deceive one's self than to deceive others, and that the ostrich is not the only creature that buries its head in the sand.

Several big land companies, small real-estate dealers, and two railroad companies issued fat pamphlets with pictures showing cows wandering over pleasant hills, a pretty girl by a trellis of sweet-peas, a patch of ground literally covered over with big potatoes, a man's smiling face above a field of waving wheat, and other sights calculated to make one envious of the fortunate mortals who lived where the pictures were taken—presumably in the particular dry-farm district named in the advertising matter.

I must be both unlucky and untimely, for I never could find where one could get such photographs on these particular dry farms. But my failure has little to do with the case. The dry-farming expert, "hereinafter called the D. F.," as a legal document would have it, gave me the orthodox explanation of the whole matter.

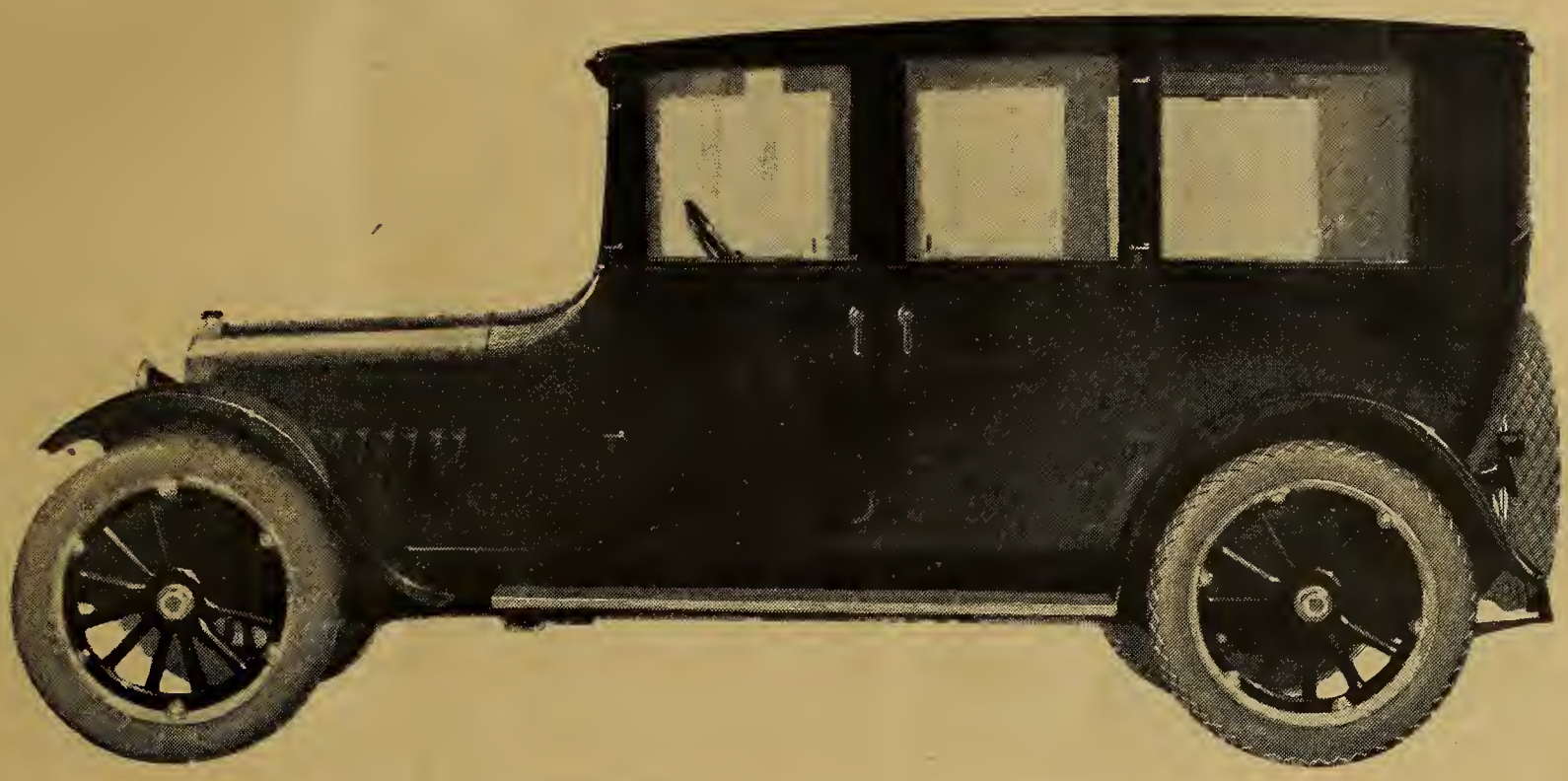
"It's the biggest proposition west of the Mississippi," said the D. F. in a real-estate brother's tone of voice. "A consumptive grocery clerk who had never seen a farm, and with a doctor's cheerful allowance of six months to live, came out here and the first year dug 400 bushels of potatoes out of an acre, and 60 per cent of them were the 'big baked potato' kind. And then the ex-grocery clerk forgot to die, thus disappointing the doctor." Here the D. F. smiled in a fatherly manner, thereby giving me an inkling of the subtle humor underlying his dry statement of facts.

"Now," continued the D. F., "people are flocking into our tract from all directions, from Bangor to Jacksonville, and from Seattle to El Paso. I tell you, people are getting tired of being shut in an office like pet guinea pigs in a box. They have to

[CONTINUED ON PAGE 28]

Oakland

OAKLAND OWNERS REPORT RETURNS OF FROM 18 TO 25 MILES PER GALLON OF GASOLINE AND FROM 8,000 TO 12,000 MILES ON TIRES



THIS NEW OAKLAND SENSIBLE SIX FOUR DOOR SEDAN IS POWERED WITH THE FAMOUS 44-HORSEPOWER OVERHEAD-VALVE OAKLAND ENGINE

OAKLAND
SENSIBLE SIX

NO matter what the roads, the season or the weather, there is true boulevard comfort in this new Oakland Sensible Six four door Sedan. Every essential convenience, including automatic controllers for the windows in its double-latch doors, an inconspicuous heater for use on cold days, a serviceable windshield cleaner and like unusual equipment, has place in the appointment of this commodious and attractive car. Its solid body construction is notable for its freedom from needless weight, and the efficiency of its standard Oakland chassis makes its range of action fully as great as that of an open model. Only immense manufacturing resources and a production of unusual magnitude allow the combination of ability, usefulness and value embodied in this sedan.

TOURING CAR, $1075; ROADSTER, $1075; COUPE, $1740; FOUR DOOR SEDAN, $1740
F. O. B. PONTIAC, MICH. ADDITIONAL FOR WIRE WHEEL EQUIPMENT, $75

OAKLAND MOTOR CAR COMPANY
Pontiac, Michigan

DEARBORN Trucks

5 Points of Superiority

1. Lighter Weight.
2. Longer Life.
3. Greater Speed.
4. Lower Running Cost.
5. Lower First Cost.



EVERY farmer who can afford a team of horses can't afford to be without a good truck. But it must be a good truck.

It must be free from mechanical liability. It must save time—not waste time. Such a truck is the DEARBORN MODEL BW 2-TON WORM DRIVE TRUCK.

It *goes*, when you want to GO—anywhere and it does not eat when it is not working. It enables more work to be done at the time it should be done. It delivers your farm products to the right market at the right time. It earns its way every day.

Dearborn Trucks ARE sturdy. They were built to answer the varied needs of the farmer.

QUICK on the road. *And strong on the pull.* The engine having 500 to 2000 pounds less truck to pull—pulls the 2-ton load easily.

—But you must see The Dearborn to know that it is "More Than Just a Truck." Facts beat WORDS. Comparison proves every claim we make. Your judgment is your best guide See all—try all. *Then Decide.*

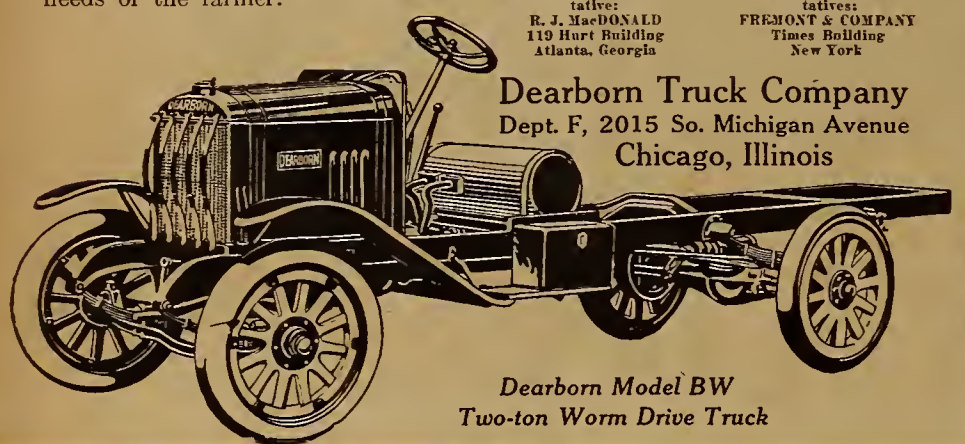
PAY from PROFITS

Farmers easily pay for their Dearborn in wages and labor saved. In time saved in getting to market. We will be glad to send suggestions.

Ask our *local dealer*, or *write* us *direct.*

Southern Sales Representative:
R. J. MacDONALD
119 Hurt Building
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New York

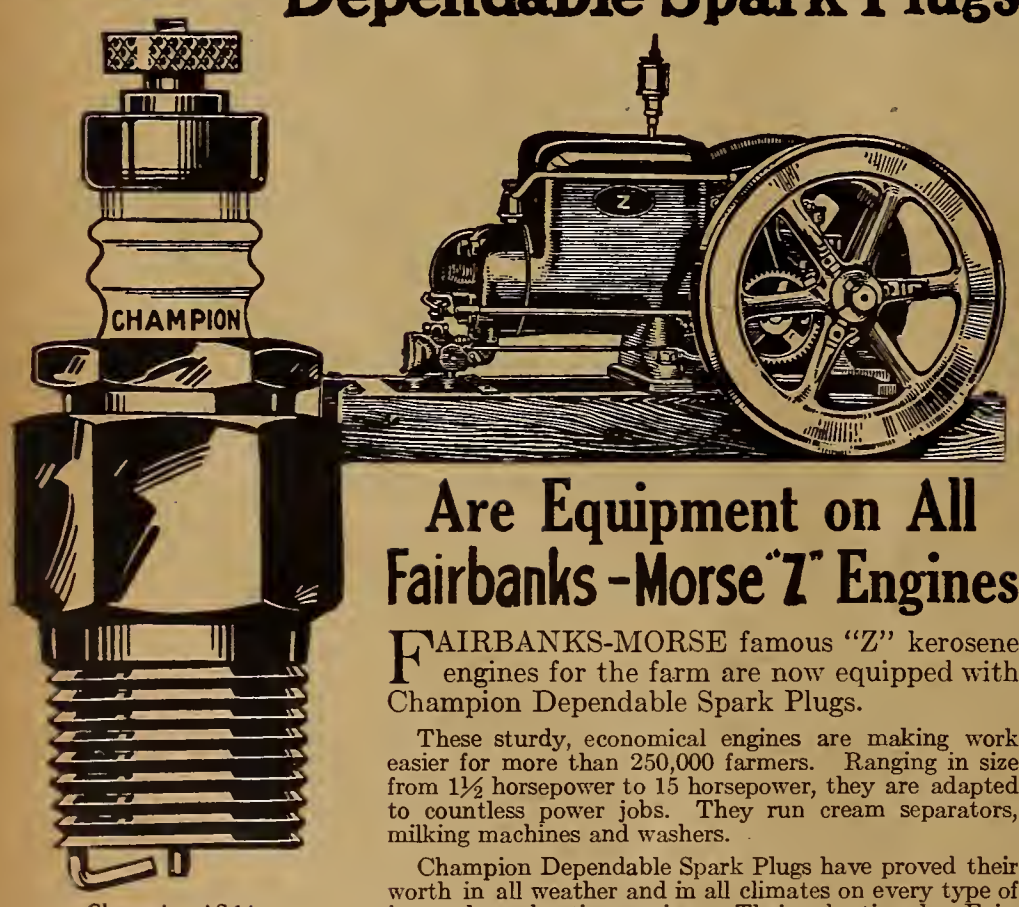


Dearborn Truck Company
Dept. F, 2015 So. Michigan Avenue
Chicago, Illinois

Dearborn Model BW
Two-ton Worm Drive Truck

Champion

Dependable Spark Plugs



Champion AS 14
Price $1.00

Are Equipment on All Fairbanks-Morse "Z" Engines

FAIRBANKS-MORSE famous "Z" kerosene engines for the farm are now equipped with Champion Dependable Spark Plugs.

These sturdy, economical engines are making work easier for more than 250,000 farmers. Ranging in size from 1½ horsepower to 15 horsepower, they are adapted to countless power jobs. They run cream separators, milking machines and washers.

Champion Dependable Spark Plugs have proved their worth in all weather and in all climates on every type of internal combustion engine. Their adoption by Fairbanks-Morse is but one more proof of the high esteem in which they are held.

Champion Spark Plug Company
Toledo, Ohio, U. S. A.

Champion Spark Plug Company, of Canada, Ltd., Windsor, Ontario

Practical Marketing Methods

[CONTINUED FROM PAGE 18]

and when the shipment was made there were 26 carloads of hogs, which brought over $100,000, and 10 per cent of this was turned over to the Red Cross. Practically every man in the county took part. A good price was realized for the hogs, and the share which the Red Cross received was not missed.

While the above are some of the more outstanding examples of what the extension service and county organization movement has done for the South, the really great service has been the individual work which is going on all the time, helping the farmer solve his own particular problems. When each and every individual farmer's problem has been solved, there will be no need to worry about the future of the South as a whole. It is the agent who gets right out in the field and shows him how his plowing should be done a better way, or who goes in his barn and explains in what respect his ration is faulty, that is delivering the goods, and he is the man in whom the farmer puts his trust.

Some of the things your 300,000 fellow farmers are doing which make for a safe and a permanent agriculture are:

1. More than one crop is grown, to insure an income if one or the other crop fails. Each farm produces enough feed to keep a certain amount of live stock. This helps maintain soil fertility.

2. Each farm, community, State, and section seeks to produce its own food and feed to save transportation charges and middlemen's profit.

3. Emphasis is put on growing nonperishable, staple crops, so any excess of local needs may be safely stored or shipped. Perishable crops are encouraged only as transportation and storage facilities warrant and make safe.

That the transition from a one-crop region to a region of diversified farming is gradually but surely taking place in the eleven cotton-producing States of Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, and Texas is shown by figures of the Bureau of Crop Estimates and the U. S. Census for 1910 to 1918. These tables show that in 1910 the value of the cotton crop in the eleven cotton States (lint only) was $820,407,000, while the value of the twelve other crops—corn, wheat, oats, barley, rye, buckwheat, flaxseed, rice, potatoes, sweet potatoes, tame hay, and tobacco—was only $623,805,000.

In 1918 the value of the cotton crop (lint only), in these States, was $1,616,207,000, while the value of the twelve other crops was $1,646,410,000. To visualize the change that is taking place, at the same time, in the production of animals, a study of these figures, relative to the number of animals on the farms of the fifteen Southern States, is very enlightening:

Percentage of increase in 1919 over 1910: Swine, 31.1 per cent; horses, 4.7; mules, 17.7; milch cows, 10.7; other cattle, decrease, 6.3; sheep, decrease, 1.4.

Thus a healthy growth in number of all kinds of live stock is shown except in the cases of other cattle and sheep. Other cattle have been rather steadily decreasing since 1910, the low point being reached in 1914, since which time there has been an upward trend. The cattle tick and the dry years in Texas and Oklahoma, the two greatest cattle-producing States in the South, are mostly responsible. Thus the average of the whole region is brought down, although there has been a very great increase in such States as Alabama. Texas and Oklahoma have forged ahead on sheep in spite of the dry years, while several of the States which have less favorable climatic conditions for sheep have fallen off materially.

The negro farmer is being well taken care of in this campaign for better farming. There are 178 colored men acting as local agents who work with negroes only. All the other agents do work with colored farmers. No race line is drawn.

Bradford Knapp tells an amusing incident which happened in the early days of the county-agent movement. He was visiting one of the first agents, who was a real Southerner and a splendid farmer, although he was not very well versed with book learning. Knapp accompanied him on one of his demonstration trips. One of the questions asked was:

"Do you work with negroes?"

The agent reflected a bit and replied:

"Well, sah, I guess I do, now that you mention it; but I nevah thought of it that way before." They arrived presently at a large plantation where about 40 negro tenants were waiting for the agent, who took them on a tour of the various farms in the plantation.

The first farm visited was the negro's who had raised the best crop of corn. The agent had him get up and tell just what he had done to obtain his big yield, which he did with the simple directness peculiar to the colored man. He had followed directions implicitly, and remembered everything he had done. The other tenants were much impressed. So they passed from one farm to another, each tenant doing the talking and demonstrating at his place. The agent merely got them started. Before Knapp left, the agent drew him to one side and said that there was just one very important thing that he wanted to ask.

"You know, Mr. Knapp, there are a lot of no-account people around here who knock everything we do. They won't listen to what I tell them, but they go home and imitate what we do. What can I do in a case like that? Those men are thieves; they are stealing our methods. And they don't give us any credit."

"Well," replied Knapp, "we don't care anything about credit so long as they are getting better crops." Which expresses the true spirit of extension work as well as anything I ever heard.

Various methods of organization are used. Sometimes the agent heads the county organization. In other districts he merely acts in an advisory capacity or handles the secretarial and detail work. Some organizations are very complete and complex. Others are models of simplicity. The main thing is: Does it work? The most successful almost invariably include strong and complete community organization. It is the community club that really gets the results. Very often the communities are organized first and then welded into a county unit.

It is very important that the boys' and girls' club work be properly handled. The farmer's wife is not neglected. I will tell in another article how she is being helped.

One county agent in Texas has a novel way of detailing his work to subordinates. I saw his annual report. It was quite lengthy, and filled with interesting photographs of the work and the people who are doing it. In every community will be found men who are partial to some particular crop or breed. This agent capitalized the enthusiasm shown by these men by making them heads of the different departments, such as Soils, Cotton, Corn, Sorghums, Cattle, Swine, etc. Each department head had his individual report in the main report telling what there had been in his field in the way of improvements.

A county organization will help a farmer, no matter how many college degrees he has or how good a farmer he is. There are constantly arising problems which he must face, and which may have been solved by someone in another part of the county or State. He is enabled through his county organization to draw on the other man's experience. Perhaps a better variety of corn is needed or a perplexing problem in trying to make a balanced ration arises. The county agent and his assistants will know of this, and their knowledge is for the use of all.

It has been found best to handle the very important work of co-operative buying and marketing through agencies other than the county organization, although they may be affiliated with it. It is better to keep the county agent and the administrative end out of the tangles of business, although they may aid in forming these co-operative buying and selling agencies. As the purely business side grows, it will be able to support a man to handle that alone, and his salary will be more than earned if he is efficient, as was clearly shown in handling the feed situation in Oklahoma and Texas.

But what does all this mean to you? Simply this: If you and your neighbors haven't a county farm bureau, you can use one just as these farmers have done. You can get the plan complete by writing Director Knapp, Southern Extension, Department of Agriculture, Washington, D. C.

What will it do for you? It will open the way to co-operative buying and selling in your community, help solve many of your individual problems, and, perhaps best of all, give you a unit on which to join the proposed National Association of Federated Farm Bureaus, which is to be organized at

[CONTINUED ON PAGE 50]

Look Ahead to Next Year's Harvest

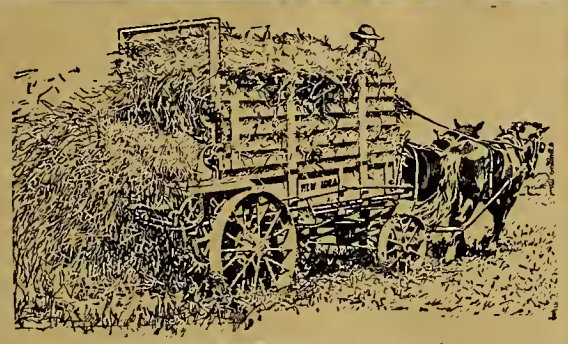
—and the harvests of years to come

HARVESTS measure the health of your land. The farmer who uses wasteful methods of manuring robs himself of from five to fifteen bushels per acre. And more, he robs his soil of fertility which even proper manuring cannot restore for years.

PROPER manuring means light applications. It means applying manure while it is fresh. It means thin, but thorough, applications to every square foot of soil.

Your farm paper editor, county agent or experiment station men will tell you that light applications the year 'round pay best. For government tests show that six months' storage means an actual loss of one-half the valuable nitrogen, potash and phosphoric acid plant-food properties of manure—a loss that any farmer can ill afford to stand.

So begin right now—and through every week of the winter continue—to spread manure direct from your stable onto your fields. Neither cold weather nor snow will stop this good work if you use a



THE NEW IDEA
Straw Spreading Attachment

NEXT to your manure pile, straw is your biggest, most valuable by-product. Burn it, and you burn fertilizer that is worth, at the very lowest, $8.00 per ton. Burn it, and you burn the greatest protection you can give your wheat against winter killing. For adding humus to your soil, preventing soil washing and blowing, ***straw is almost invaluable!***

The NEW IDEA Spreading Attachment—for old machines or new—shreds the straw and spreads it evenly 8 to 10 feet wide. Easy to put on or take off—***a one-man machine.*** Your dealer will show you. Or, write direct for literature.

NEW IDEA
Registered U.S. Pat. Off.
The Original Wide Spreading Spreader

(Known as the NISCO in the West)

The time to buy your NEW IDEA is NOW! No other investment will pay for itself so quickly. No other labor will show up so big on your next year's profits. And in no other way will you save so much disagreeable, dirty work in handling your manure.

Just look at the illustration. See how the NEW IDEA spreads—a full seven feet wide—laying a thin, uniform blanket of finely shredded manure on every square foot of ground covered.

Loads High Hauls Easily

The NEW IDEA is built low down—it is easy to load. Pile it a full 30 inches high, and your team will handle it on any ground—spreading 3, 6, 9, 12 or 15 loads to the acre as you wish.

No gears on the NEW IDEA to break in cold weather. Strong chains drive the pulverizing cylinders and the big steel distributor paddles that spread the manure in an even stream well outside the wheel tracks.

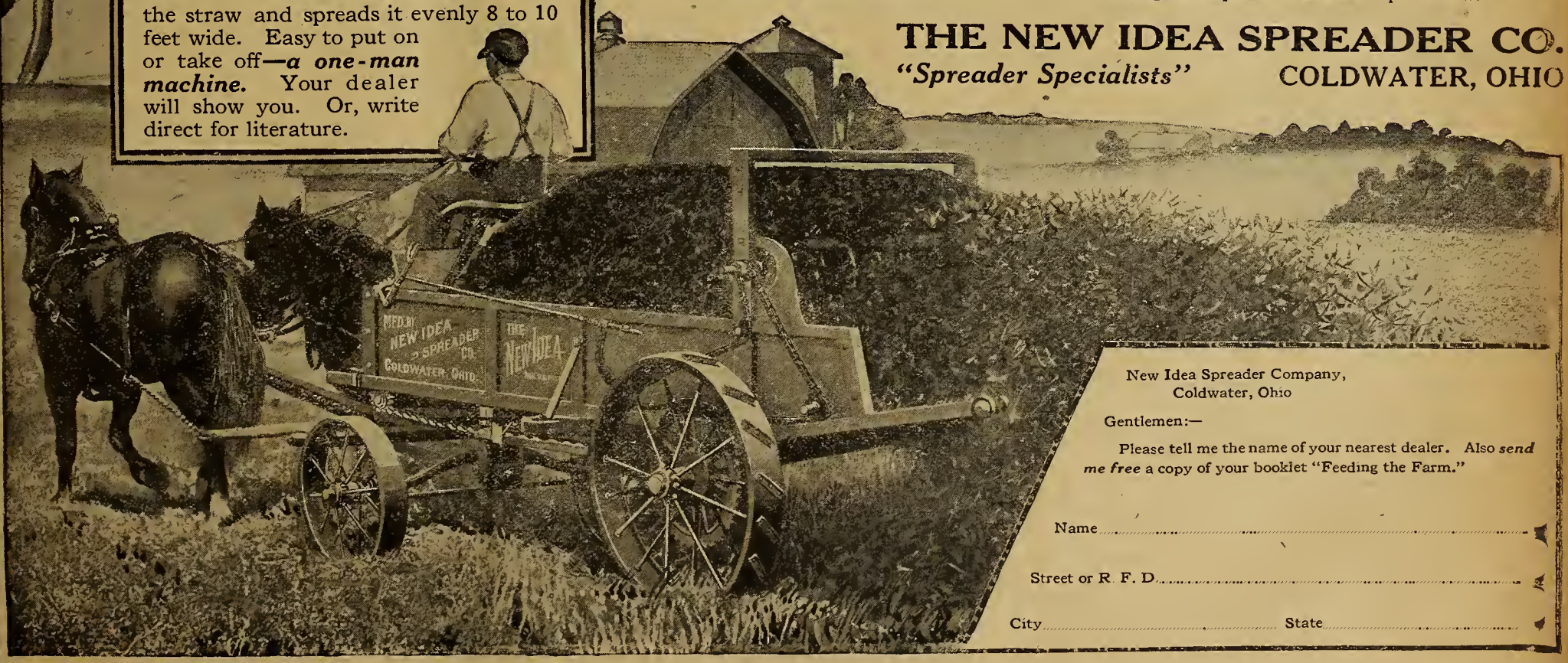
Simple in construction, extra strong, yet light-draft—this is unquestionably the spreader you need.

See Your Dealer

If you don't know the exact money value of your stable manure—used right—ask your NEW IDEA dealer. Let him explain how the farmers of this country are actually losing $700,000,000 each year through failure to get the most from their manure. And then let him show you just how the NEW IDEA will ***change your share of this loss to profit.***

We have prepared a mighty interesting and valuable booklet, "Feeding the Farm." It is packed with facts and figures about the money your manure pile can make. Sent, with a copy of the latest NEW IDEA catalog, on request. Use the coupon below.

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"Spreader Specialists" COLDWATER, OHIO



New Idea Spreader Company,
Coldwater, Ohio

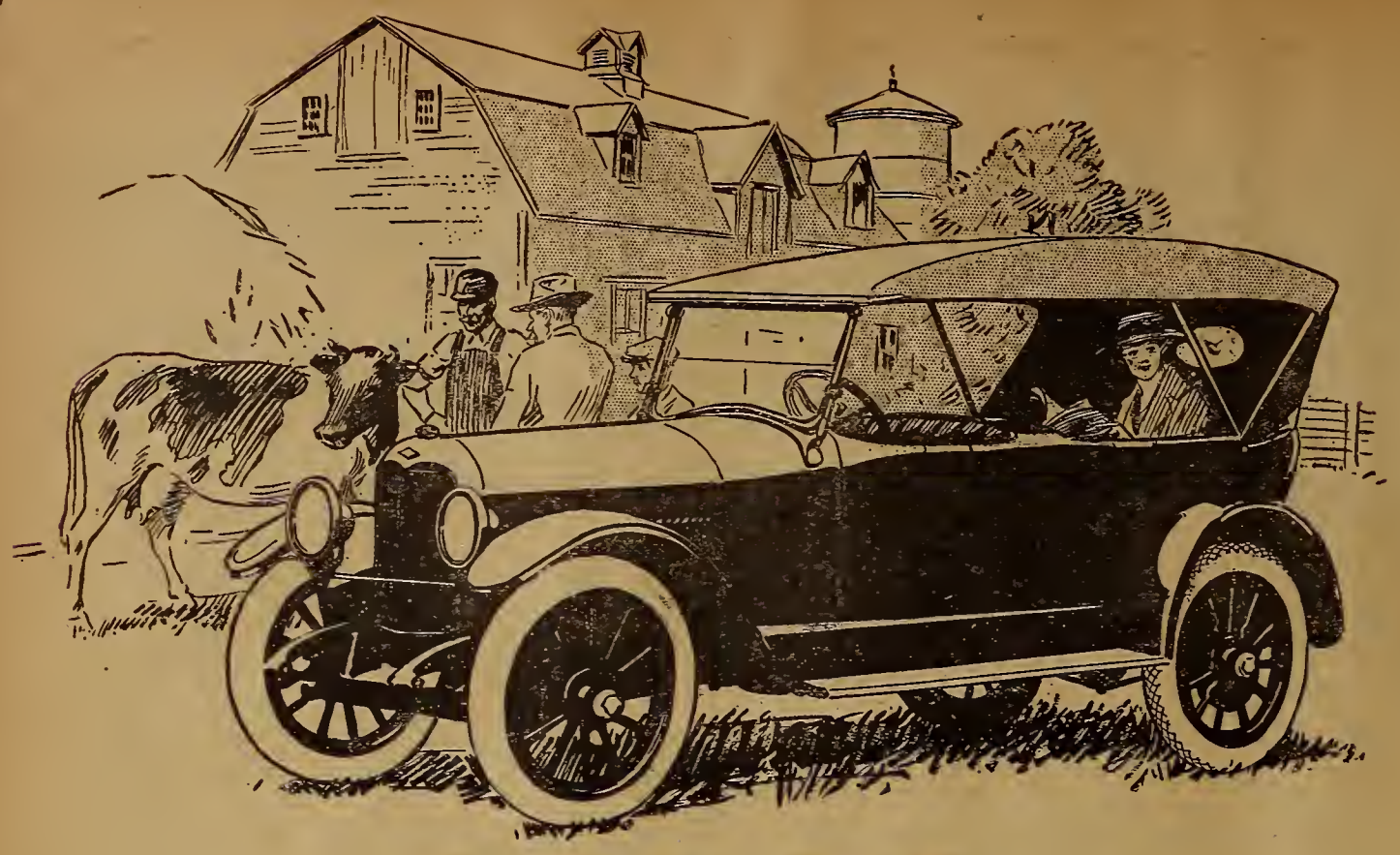
Gentlemen:—

Please tell me the name of your nearest dealer. Also ***send me free*** a copy of your booklet "Feeding the Farm."

Name .....

Street or R. F. D. .....

City ..... State .....



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The Most Beautiful Car in America

We Share the Responsibility

Buying a Paige Car is very much like buying a high grade, first mortgage bond. Both the principal and interest of the investment are protected by a company that has never failed to meet its obligations.

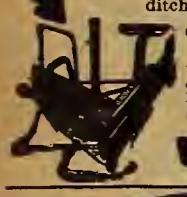
Each car that is produced by this factory must satisfy two groups of people—our owners and ourselves. In each day of service it must justify its reputation and the faith that has been placed in it. It must be *worthy* of every Paige tradition or it cannot bear the Paige name plate.

Such, in brief, is a simple, straightforward statement of the Paige policy. It is by no means original or spectacular. But it affirms that all Paige cars are honest cars and we gladly share the responsibility of ownership.

PAIGE-DETROIT MOTOR CAR COMPANY, DETROIT, MICHIGAN

DO DITCHING THIS FALL

Prevent winter rains smothering the soil. Put land in shape for early spring work. Get your ditching and terracing done now with



The Martin Farm Ditcher Terracer and Grader

Works in any soil. Makes "V"-shaped ditch or cleans ditches down 4 ft. deep. All steel. Reversible. Adjustable. Write for Free Book.

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10 Days Free Trial



Steel Wheels

Cheaper than any other wheels when you figure years of service. Make any wagon good as new. Save labor—easy to load.

COST LESS

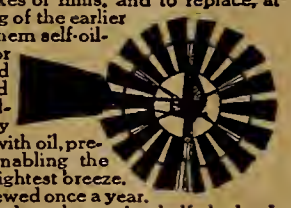
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INSYDE TYRES Inner Armor for Auto Tires. Double mileage, prevent blow-outs and punctures. Easily applied in any tire. Thousands sold. Details free. Agents wanted. Amer. Accessories Co., Dept. 116, Cincinnati

THE SELF-OILING WINDMILL

has become so popular in its first four years that thousands have been called for to replace, on their old towers, other makes of mills, and to replace, at small cost, the gearing of the earlier Aermotors, making them self-oiling. Its enclosed motor keeps in the oil and keeps out dust and rain. The Splash Oiling System constantly floods every bearing with oil, preventing wear and enabling the mill to pump in the lightest breeze. The oil supply is renewed once a year. Double Gears are used, each carrying half the load.



We make Gasoline Engines, Pumps, Tanks, Water Supply Goods and Steel Frame Saws.

Write AERMOTOR CO., 2500 Twelfth St., Chicago

60 lbs. PER H.P. ← **That's Enough For Any Engine to Weigh**

Any engine that weighs more than 60 pounds per horsepower is too heavy for farm work. It wastes gasoline, material, time and energy.

Cushman Double Cylinder Engines weigh only one-fourth as much as ordinary farm engines, but they are balanced so carefully and governed so accurately that they run even more steadily and quietly. They are also the most durable farm engines in the world, on account of improved design and better material and construction.

CUSHMAN Light Weight Farm Motors

Easy to Move from Job to Job

20 H. P. Double Cylinder weighs only 1200 lbs. For heavy duty jobs, such as heavy sawing, shredders, shellers and grain separators.

15 H. P. Double Cylinder weighs only 780 lbs. A wonderful motor for silo filling. It will handle most ensilage cutters that usually require a 20 H. P. heavy engine.

8 H. P. Double Cylinder weighs only 320 lbs. For all smaller jobs.

4 H. P. weighs only 190 lbs. Besides doing all small jobs, it may be attached to binder to save a team.

Cushman Engines do not wear unevenly and lose compression. Every running part protected from dust and properly lubricated. Equipped with Throttling Governor, Carburetor, Friction Clutch Pulley and Water Circulating Pump. Ask for Book on Light Weight Engines.



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Young man, are you mechanically inclined? Come to the Sweeney School. Learn to be an expert. I teach with tools not books. Do the work yourself, that's the secret of the

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of practical training by which 5,000 soldiers were trained for U. S. Government and over 20,000 expert mechanics. Learn in a few weeks; no previous experience necessary.

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LEARN A TRADE Sweeney

SCHOOL OF AUTO-TRACTOR-AVIATION 11 SWEENEY BLDG. KANSAS CITY, MO.

Those Stupid Folks

[CONTINUED FROM PAGE 24]

get out into God's air and sunshine, and we are giving them the chance of a lifetime."

The D. F. looked at me with a slightly changed expression, resembling the smile on the cat as she meditates on the benevolent assimilation of a mouse.

"I don't know how you are fixed financially," he proceeded, "but, since you are an old friend, I shall be glad to let you into the enterprise. I can easily finance the whole thing myself, you understand, but I like to share all good things with my friends."

Quite so, I dare say. But somehow I never was quick at seeing gambling chances, and opportunity once more passed me by.

Last year the final chapter of this big dry-land plunge was written, at least so far as the D. F. is concerned. It was the end of the inevitable three-year period of drought. All the enthusiasts who had bought farms in this tract understood at last why it was called "dry farming." The Government saved their starving cattle by transporting them in special cattle trains to available pasturage in other States. Finally, when there was no longer even sufficient drinking water, the settlers dispersed and left the land still lying out of doors. With the loss of all his savings of a lifetime, the education of the D. F. on the subject of dry farming was complete.

And who is the D. F.? His name is legion. Albert, Joe, and the D. F. are not unusual or exceptional men in any sense. Albert, Joe, and the D. F. had precisely the same ideas about farming as are held by two thirds or more of the city population. Our three heroes merely acted on their belief, and were promptly disillusioned and set aright.

The great mass of the city consumers still hold the same old beliefs. They are encouraged to persist in this frame of mind by the marvelous agricultural literature which the daily and periodical press affords. They read about living on the "fat of the land," and forget that there are streaks of lean in this fat. Then they study about "500 hens and a competence." After reading "Two acres and liberty" they conclude that 40 acres must be good for a regular jamboree. And thus the age-old trick of palming off exceptional cases for the average is re-enacted.

The old adage that "turn about is fair play" may perhaps apply here. The farmer has been preached at by city editors, consumers' leagues, chambers of commerce, and heaven knows how many other organizations. He has become the object of nation-wide concern as to his education. He is flooded with bulletins, pamphlets, books, tracts, and peripatetic wisdom venders, all telling him just how to run his business, how to steer his course, and just where the rocks and shoals are located.

Now perhaps the time has come to turn the educational guns about and fire them on the city. Wouldn't it be well for the city dwellers to know some of the real facts about agriculture? There are people living on farms, you know. How fares it with these people? Are they getting a square deal? What can we do to make the farmer happier, more prosperous, and more efficient? Can't farmers' organizations choose spokesmen to tell how it goes with the farmer, and what city folks can do to help make farm life the health-giving foundation of national stability which it should be?

Washington Milk Producers Protected by New License Law

DISSATISFACTION with milk tests made by private buying concerns will be largely eliminated in the State of Washington by a regulation which went into effect in June, 1919. All operators of Babcock testers must now be licensed by the dairying division of the State Department of Agriculture, and a preliminary examination must be passed showing that they are qualified to make these tests.

Creameries, condenseries, cream-buying stations, and any milk plant where milk or cream is bought or sold come under the jurisdiction of this act, and must now display the tester's license in their place of business before they will be permitted to operate. This should largely eliminate the dissatisfaction shown in the past with butterfat tests made by these concerns and might be profitably adopted in other States.

J. T. B.

Company's Coming to Your House

[CONTINUED FROM PAGE 6]

readers could do to help make the farm census a success. The answer was, "Keep books, and start right away." Even the simplest account-keeping will help wonderfully, they said. The census will cover the season of 1919. To be prepared when the enumerator stops at your gate, therefore, start an account now, and have it show these things:

1. Money paid out in 1919 for hay, grain, mill feed, manure, fertilizer, and labor—by month, year, or day.
2. Acreage, production, and quantity sold of each farm crop and kind of hay.
3. Value of farm products sold to or through a farmers' marketing organization.
4. Amount and value of animal products sold—meat and meat products, milk, butter, cream, wool, chickens, and eggs.

That ought not to take a lot of time, and t will help Uncle Sam's books to tell the eal truth. If you want information on he best methods of keeping farm accounts, write to the United States Department of Agriculture at Washington, or to your tate agricultural college.

But just how does the census benefit you, he individual farmer?

In many ways. One of the most imporant is the basis it affords the Bureau of Crop Estimates in making its periodical stimates of crops and conditions. The prices you get for farm products, you well know, are governed by production. If there were no unselfish agencies estimating and eporting production, that business would e in the hands of speculators, and subject o their manipulation. Official government stimates, therefore, are the farmer's safeguard.

Legislation to improve farm conditions s sound and fair only when based on facts. The census tells the truth—if you tell it to he enumerator.

Investigations by experts, based on cenus facts, and the publication of their reults, represent one of the most direct enefits to farmers. The census shows the nvestigator where economic evils exist and where assistance is needed to overcome hese difficulties. County agents can better plan for the improvement of farming nd make calculations on the various needs f their counties for seeds, fertilizer, and a core of other things.

Manufacturers, armed with census facts, re able to concentrate their efforts on a nown territory, to seek its products or to id in its development.

It will be good for us all to know the ruth about American agriculture. Help he enumerators get it next January.

My Experience With a Cut-Over Farm

[CONTINUED FROM PAGE 7]

lso kept track of every cent taken in and pent. At the start I decided that this was ecessary. These books are kept by me, ut my wife knows more about the detail han I do.

I don't expect to have enough money to uy a herd of cows in the next few years, o I am gradually breeding up the stock on and, and adding a cow here and there here I can find a bargain. A neighbor has pure-bred bull to which I breed my cows. have had good luck so far, only getting ne bull calf, which I intend to veal.

I believe a man can start on this sort of and if he has about $1,000, and is willing o work real hard for a few years. Half of his $1,000 can be paid on the land, and the est used as a working capital. All that is eeded is a shack to live in, a horse and agon, a garden, clearing implements, and oney for food. Work can be obtained in he winter, and this will help the income.

A dishonest or lazy man has no place up ere.

Some men come up here and see oodles of lover in the wild land. Immediately they uy cows, giving no thought to the winter. One of my neighbors did this very thing, and ay the first winter cost him $45 a ton.

The secret of success, as I see it, is in *lanning* your work, and then doing it. The more a man works the more he accomlishes. I have always believed that work s my boss. I have found that if I boss the ork nothing is done.

Look at the wormy apples now, and reolve to spray next year. Your state college r experiment station will furnish you with praying schedules.

NEW Mitchell SIXES

OUR VICTORY MODEL
New in 100 Ways

A New-Class Six
Based on 16 Years' Experience

This new Mitchell is not merely a new model. The aim has not been new attractions, though scores of them are added.

It represents a two-year effort to correct Light Six shortcomings. It is based on many-year experience with tens of thousands of them.

It is built to offer more strength, more endurance, more lasting satisfaction. To reduce your upkeep and your fuel cost. And to give you a Six which keeps its newness both in looks and in performance.

Over 100 Changes

These new standards have involved over 100 changes. It has taken two years to perfect them.

Yet they are not new features largely. Parts are built larger and stronger. New heat treatments and better materials have given added strength.

Much motor wear has been eliminated by smoothness and perfect fit. Also by better balance. We balance crankshafts twice now, on two new-type machines.

Fuel cost has been reduced. Power that was wasted has been saved. A thermostat is added. The carburetor intake is twice-better heated.

Trouble causers are prevented by many new and radical tests. Also by inspection, carried to extremes.

The body is built extra-staunch. The new grade top will stay new. Interlaced hair maintains the cushion shape.

There is a new-type disc clutch. There is a ball-bearing steering gear which does not tire the driver. There are long cantilever rear springs to give matchless riding comfort. And ample tests have proved these rear springs unbreakable in use.

Compare the New and Old

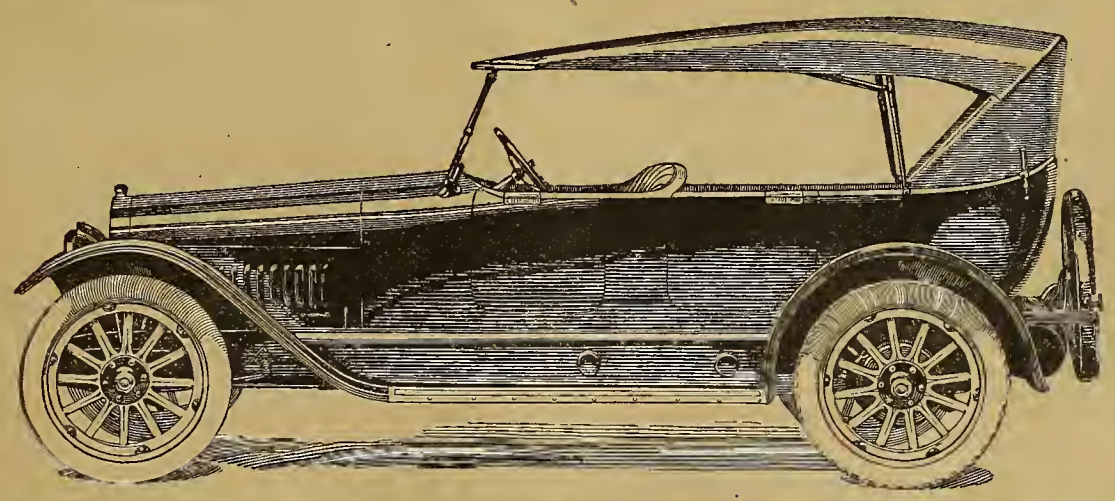
Compare the new type with the old types. Ask for our catalog which tells all the improvements. Compare our standards with old standards on all essential parts. Compare the outer details.

We have made these changes—these additions—because time has proved them necessary. Cars built in lesser ways do not keep their newness.

These are new conditions to consider when you buy a fine car now. Let us help you to a right conclusion.

5-Passenger Touring Car
$1690 f. o. b. Factory
120-Inch Wheelbase—40 h. p. Motor
3-Passenger Roadster, same price
Also built as Sedan and Coupe
7-Passenger Touring Car
$1875 f. o. b. Factory
127-Inch Wheelbase—48 h. p. Motor

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Order Direct From This List Today!

This is your big chance to buy prepared roofing, metal roofing and siding at prices that will not be equalled in economy for some time to come. But you must not delay. Quick action is necessary, for the supply of these hargain lots is limited. Read them carefully, mail order quickly.



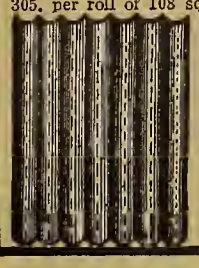
SPECIAL SNAPS FOR THIS SALE!!

Ajax high-grade rubber surfaced roofing; put up 108 sq. ft. to the roll. Complete, with nails and cement, No. TX-302, 3-ply, per roll, $1.41; 2-ply, per roll, $1.31; 1-ply, per roll, $1.07.

Rawhide stone-faced Gold Medal Roofing, guaranteed 15 years. Rolls contain 108 sq. ft., nails and cement included. No. TX-303, per roll, $2.20.

Our Famous Rawhide Rubber Roofing, 3-ply, guaranteed for 12 years; a high grade covering. Rolls contain 108 sq. ft., nails and cement included. No. TX-304, 3-ply, per roll, $1.83; 2-ply, per roll, $1.63; 1-ply, per roll, $1.33.

10,000 rolls of extra heavy high grade roofing; red or gray slate coated, rock-faced, brown pebble coated, double sanded, mineral or mica surfaced. No. TX-305, per roll of 108 sq. ft., nails and cement included, $1.93.



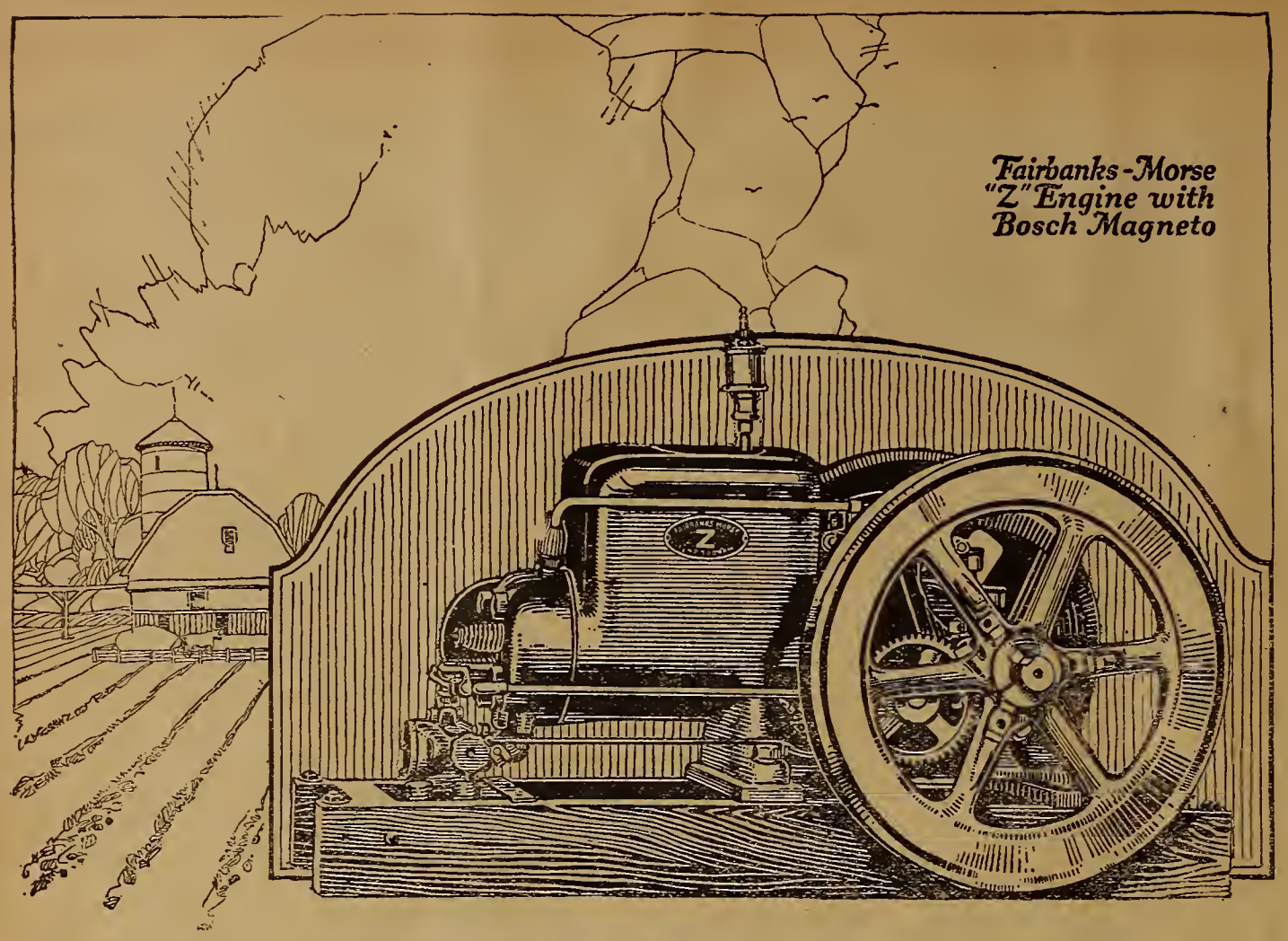
Corrugated Metal Sheets $2.00 Per Square

28-gauge painted 2½ in. corrugated, overhauled siding sheets, 5½ ft. long No. TX-306, per 100 sq. ft., $2.00.

26-gauge painted 2½ in. corrugated, overhauled roofing sheets, No. TX-307, per 100 sq. ft., $2.75.

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HARRIS BROTHERS CO., 35th and Iron Streets, Dept. TX-28, CHICAGO

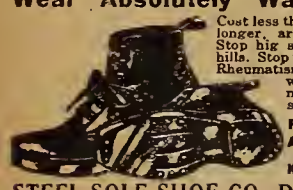




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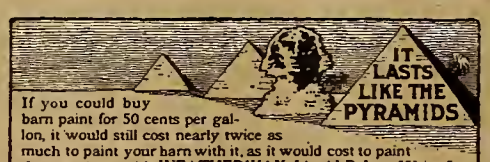


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Has two sets of spindles on combination axle—side spindles for straight ahead moving on the road; and end spindles for moving sidewise along the log from cut to cut. No stopping the engine and no lifting, prying, backing or twisting to set from cut to cut. Direct gear to drive saw—no chains to tighten; no keys and no set screws. Automatic friction clutch protects saw, allowing slippage under any pinch. 4-Cycle Frost Proof engine, Oscillator Magneto Ignition. When not sawing, demount saw equipment, by pulling one pin, and use engine for all kinds of other work.



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Write us, now, for full information on this log saw, and on our fast cutting equipment for sawing down trees. Low prices, now, on both outfits.

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BY applying yourself to work for us as a country salesman, you can better your income at once. Previous selling experience unnecessary. We teach you to be successful and pay you a fine salary from the very beginning.

Ambition and Energy

These two qualifications you must possess. If you do, we have a real job for you, and it will pay you to write at once for details to

Country Sales Manager

Farm and Fireside, Springfield, Ohio

The Way I Grow Good Sheep

[CONTINUED FROM PAGE 12]

so they will dry up. The lambs are continued on the grain ration until marketing.

I never have used anything but Shropshire bucks. They have always proved good sires, and I don't believe in experimenting when I get good results from one breed.

The care of the buck is important. One must have good strong, prolific sires, and I figure the buck is half the flock. Our bucks are used four and five years, because we do not overwork them. And we can use them that length of time because we change the ewes annually.

The bucks, when in pasture, after the breeding season, run by themselves. I keep them on grass until a month before the breeding season starts. Then I feed them lightly on oats, bran, and oil cake, increasing it gradually until they are getting a full feed. They are in fine breeding condition then. I feed them during the day.

After breeding I gradually cut down the grain ration until they are getting only enough to carry them along during the winter months when there is no pasture.

In buying ewes I try to get big animals, the bigger the better. Ewes which have good size have capacity, and a tendency to produce twin lambs. Every addition to a lamb over 100 per cent means greater efficiency, and more money to the grower. Moreover, a big ewe can handle lots of feed, and can produce enough milk to grow twin lambs when she has them.

I like to have ewes which are four to five years of age. I don't want broken-mouthed ewes, but sometimes it is impossible to get away from them. We always sort them out of the flock and resell them.

The ewes at this age make the best mothers. Unlike the ewe lambs, they are accustomed to lambing and are not feverish or nervous, and they are experienced and will take better care of the lambs.

One of the big things I look for in breeding ewes is quality. I just can't explain how I tell it, but I look for a short leg under each corner, and a good thick neck. If they have these qualifications the top and bottom lines will be reasonably straight. Quality is also told by the head. I want a refined, feminine head on a ewe and a masculine head on the ram.

I like medium-sized bone. It is quite essential, too, that the ewe be a good feeder. A well-nourished body is one sign and it can be determined by feeling along the back and ribs. A healthy ewe can be told by the color of the skin. Animals with a nice pink skin are in good condition and good feeders. Ewes with white dried-up skin are perhaps sick or poor feeders.

I shear the ewes each year, and the clip pays for their keep. This year it ran about nine pounds. I usually pay $12 per head for the ewes.

Our sheds for the ewes and lambs are open to the south, with windows on the other three sides. There is plenty of air in the shed through this arrangement, and at the same time it protects the stock in the winter. The lambing shed, of course, is not open, but doors which are cut in half can be opened at the top, allowing free circulation at all times without causing drafts.

How the Eskimo Gets His Meat

THAT meat production can be developed in the arctic and subarctic regions of Canada is believed by the Canadian Government, which is investigating reindeer with a view to introducing them in the far northern regions of that country.

The reindeer lives principally on the moss, which covers thousands of miles of country in Canada, Alaska, and Siberia, and is a domesticated animal. It is not generally known that the reindeer is not a native of Alaska, but was introduced there in 1891 by Dr. Sheldon Jackson, then general agent of education in Alaska.

He discovered that the natural food supply of the Eskimo was fast disappearing with the incoming of the white hunters, and that unless something was done the Government either would have to feed 20,000 natives or else let them starve.

The solution was the reindeer which he introduced in 1891, and later an appropriation was received from Congress for carrying on this work. N. G. S.

Reducing the Fruit and Vegetable Spread

By J. T. Bartlett (Colorado)

THE difference between the price paid the farmer and the sum the consumer pays—the so-called "spread"—is greater with fruits and vegetables than with any other class of produce. In some cases the retail store sells for $1 produce which the farmer sold for 30 cents. Invariably, under the present distributing system, the spread is very high. This undesirable condition is being attacked both theoretically and practically in very interesting ways at present. A glance into the future would seem to justify the hope that radical improvements in fruit and vegetable distribution, benefiting growers and consumers alike, will be effected.

On the theoretical side, R. W. Merrick, an expert late of the United States Bureau of Markets, declares that 10 to 25 per cent of the high cost of fruits and vegetables is attributable to the use of flimsy, one-trip, so-called "free" packages in which produce is sold. A simple veneer crate costs 30 cents, a bushel hamper 25 cents. Merrick declares the imperative need is for substantial, permanent containers which can be used over and over again, much as metal cans and bottles are employed in the milk trade. He predicts that ultimately the country will be driven to adoption of permanent steel containers for use in the produce trade.

The consumer, says Merrick, little realizes how high he is taxed for packages. On a head of lettuce he pays 1 cent; on a basket of grapes, 4 to 9 cents; on a till basket of tomatoes or peaches, 5 to 6 cents; on each head of cabbage or cauliflower, 1 to 3 cents; on each grapefruit, ½ cent; on each dozen oranges, 1 to 2 cents; on each fancy apple, ½ cent.

While the produce trade and farmers in general are inclined to believe Merrick's opinions rather advanced, it is noteworthy that producers themselves have attacked the same unsatisfactory condition, with good results, within recent months. They have taken the old public-market idea, hoary with age, and vastly improved it in some respects.

The traditional public market is a centrally located stand at which farmers, driving in from the country, occupy stalls, or maybe simply back up to the curb, driving home when the wagonload is sold. The public market so operated always reduced prices to consumers, in some cases narrowing the spread radically; but an objection to it made by many farmers was the time it demanded. Unless they were near the market, or could sell large quantities of produce in quick time, the labor of selling direct would often more than offset the higher prices obtained.

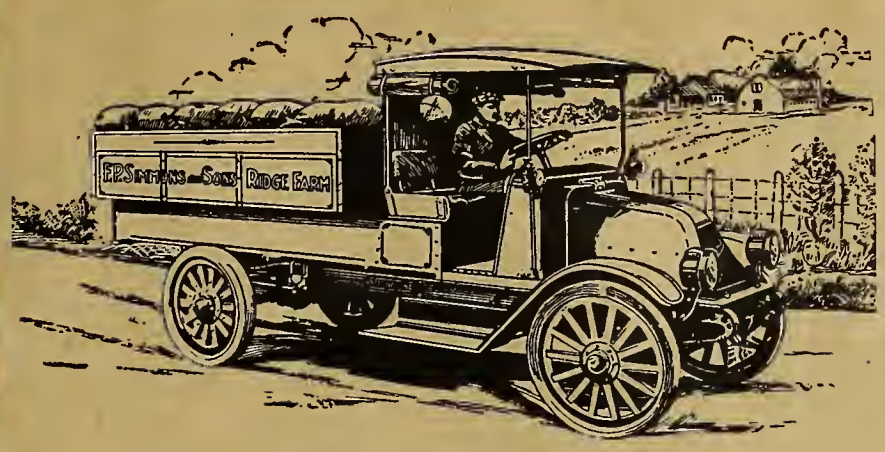
On the consumer's part, distance to the market was a leading objection to this direct-to-consumer plan. The saving in price obtained was secured at the expense of too much time.

These objections can be conveniently overcome, as numerous public markets demonstrated the past season. In a Massachusetts city a farmers' wholesale market was the ingenious plan. Instead of selling in small lots, as on the usual public market, the farmers sold in wholesale quantities. Most of the purchasers continued to be consumers, glad to save money by purchasing in quantities. The farmers saved so much labor in selling that the public-market idea was made profitable.

In other places farmers combined and rented premises which they placed in charge of a selling agent. They delivered fruit and vegetables to their market at regular intervals. This plan reduced the spread to a very reasonable point, yet demanded only a moderate amount of extra labor of each supporting farmer.

Still another plan, overcoming the paramount disadvantage of the large central public market, was the establishment of small markets at various points about the city. This offered a real inducement to wide-spread support of the farmers' markets by consumers.

The war resulted in public markets springing up all over the United States. While they mainly reduced the spread by eliminating middlemen, indirectly they effected economies in other ways—in the matter of containers, which R. W. Merrick complains of. The public market from time immemorial has been associated with the market basket, used over and over again. The public market saves a great deal of money by not furnishing containers. In new and more efficient forms the public market seems destined to play a considerable part in reducing living costs.



You Wouldn't Make Three Trips

to town to haul farm produce that you could easily handle in one load—it would be a needless and expensive waste of time.

And yet—you haul your crops to the elevator with your team and wagon although it takes more than three times the length of time that would be required with a motor truck—time, two-thirds of which you might just as well employ to good advantage doing your fall work.

According to the United States Department of Agriculture, the cost of hauling wheat or corn by motor truck is just one-half that of horse and wagon hauling.

International Motor Trucks are especially designed to meet farm and country road conditions. The chassis and artillery type wheels are of very sturdy construction as are the engine, clutch, transmission, rear axle—all designed, built and tested to provide low-cost hauling under the trying conditions usually encountered in farm hauling. And, moreover, **International** trucks have behind them the same repair service, handled through our eighty-eight branch houses, that you get on McCormick, Deering and other International machines.

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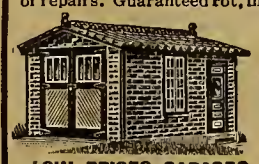
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What Do They Do With Their Time?



ONE of the world's unsolved mysteries is how children find enough things to do in the daytime to wear themselves out so completely by night. We have probed this problem, and this page of pictures partly clears it up. The answer in the case of Joe, Alex, and Prissey Toneti of Long Island, New York, seems to be goats. "Goats," says Joe, "are very strenuous exercise. And of course the folks wear gas masks when we come home in the evening, but that's nothing."

Photo by Alice Boughton



Photo by Alice Boughton

THE dairy industry of America has much to be thankful for to this trio. They keep one cow busy the year round. All three of them demanded to be refilled with milk before they would have this picture taken. They are Jane and Peter Williams and little Jezahel, the Maltese marvel, who can meow unbelievably long and penetratingly when locked up in the cellar at night. The answering wail of Jane and Peter is also distinctive. Maxim silencers are being considered by Mr. and Mrs. Williams.



Photo by Alice Boughton

LITTLE Muriel Smythe of Brookhaven also goes in for odoriferous playmates, but of a sweeter sort than the Toneti goats. She loves flowers. Muriel is a business woman, too. Note the shrewd smile and the commercial glint in her eye. She lets Father buy the bulbs and things for Mother to plant, while she gathers the posies and resells them to Father. We fear, Muriel, that you will grow up to be a naughty middleman.



Photo by Alice Boughton

PAPA BOUGH... Boughton th... "barks." And, ... are. But not th... long. It takes ... and another kin... can't be said th... thuse over the ... Margaret and Fr... clothes, and th... ruinous to many ...

marks to Mamma ret and Frances are mail reports, they whim these eggs be- bid to climb a tree, an egg in it. And it ston either side en- ees. The parents of t a ruinous to many of the nest say it is

Photo by Alice Boughton



RUTH DARLING, ... known as "Pussy," devo... much time to crystal-gaz... She can tell the future by ... ing into this mysterious ... ball. It is practically infallib... At one time it will foretell ... she is about to receive a p... of bread and jam; at another ... that she is going to be take... to get ice cream. On occa... it foretells a trip to the pa... Never is it wrong. And whe... it is, Ruth's mother can ... at it and predict tears.





THIS little fellow and his pal are dreamers. They see visions we cannot see—wonderful castles and beautiful princesses, and hobby-horses and wagons and choo-choo trains, and plates of meat scraps and chaseable cats racing up trees, such as no story book writer has ever penned, no toy manufacturer ever conceived, no housewife ever vouchsafed any dog, and no feline ever presented to the world of belligerent dogs. But *they* see them.

MRS. WILLIAM H. KELLY of New York is part of the answer to what children do with their time. She has a very ticklish job. She tells stories to mixed audiences. You see her here with one of her most thoroughly mixed—an Austrian, an American, a Russian Jewish, and an Irish child. The Paris Peace Conference had nothing on her when questions of self-determination for small citizens arise in one of these meetings. Candy and another story are usually the peace terms that are assigned.

Photo by Alice Boughton



AND here we have "Mike" Barton, son of Bruce. No question about what he does with his time. He is beckoning his father to come into the garden and help him rake. "Father," he says, "may write editorials and articles and novels, and get by; but, for *my* part, I have to work for a living." And work he does. He has just succeeded, by strenuous effort, in scattering the leaves the hired man has spent an hour getting into a neat pile. Ably assisted, we might add, by his young sister, Betsy.





Photo by Paul Thompson

AT LAST we reach an important conclusion. Many children spend most of their time laughing. When they aren't laughing they are crying. When they aren't crying they are running. When they aren't running they are jumping up and down where they stand. Many a time they do a little shrieking, a little falling off chairs, a little nose-bumping, and a prodigious amount of eating and sleeping. This, it seems to us, is the real truth, and rather conclusive.



Photo by Alice Boughton

HERE we will have to give it up. The McKean twins are certainly putting in their time, but what they are doing we don't know. We asked them, and they didn't know. We even asked the dog, Rajah, but he just smiled knowingly. He probably knows. Privately and confidentially, and in spite of all the explanations on this page, we really think that nobody knows what children do with their time—not even the children.

OF COURSE, if you really want to see children who make definite use of their time, go to the farm. This is little Marie Doreau, who lives near Quebec, and her three hens, Biddy, Blacky, and Petite. They know Marie, and when she returns from school she calls them, and they come running to get what she has for them in her pan. As you see, the hens are of three different breeds, but Marie loves one just as much as another, and says that they all strive to see which can lay the most eggs for her.



Photo by Edith Watson

A Late Start at That

By Sewell Ford

HONEST, I'd sooner expected Swifty Joe to have quit the Physical Culture Studio and opened a manicure shop. Why, tbis T. Walker Wells party, from all I'd ever seen of him, was about as flighty as a corner stone and no more irregular in bis habits than a swing door. You could have run trains by bim.

And yet, now that I'm over the jolt and can think back calm, I do remember noticin' sort of an odd look that used to come into them mild, pale blue eyes of his occasionally. Just a flicker, maybe when I was gassin' away witb him about nothing in particular; kind of a freaky, whimsical flash, with a queer little quirk to the mouth corners. Then, almost before I'd started wonderin' what had struck him so sudden, he'd give his shoulders a little shake and it would be gone.

"I—I beg pardon," T. Walker would remark. "You were saying—"

A medium-sized, well-built chap, T. Walker; kind of distinguished lookin' too, for bis thick, wavy hair was well sprinkled with gray, althougb he couldn't have been over forty. An old batch, and all kinds of a plute.

If there ever was any such animal as a real New Yorker I expect T. Walker Wells was it. Anyway, he was born on Madison Avenue, and he was still gettin' his mail at the same number tbey put on his birth certificate. Can't beat that, can you?

And of course he knew his native city about as well as that kind usually do. He could locate the city hall, havin' had to go down there frequent to swear off his personal tax. Also he knew the Bronx must be up the other way, because some of the subway expresses ran there. Third Avenue was where the L cars were so smelly, and on east of that—well, there were breweries and Blackwell's Island. He'd been west of Seventh Avenue plenty of times. One drove across to get to the steamship docks. Awfully messy. But as a rule he didn't go much above the Seventies, and now it was gettin' so one seldom went below Thirty-fourth. Say, a sightseein' tripper who'd been on from Petoskey, Michigan, or Weeping Willow, Iowa, only ten days could have taken T. Walker out and got him lost within sigbt of the Metropolitan tower.

But he was a New York business man, Mr. Wells. Oh, yes! Managed the estate. That is, he bad an office where he dropped in Tuesdays and Fridays to consult witb his agents, sign checks, and ask foolish questions about repair bills and investments. Rather a bore, you know; but real estate needed watching. Half of it belonged to his sister, Miss Martha Wells, spinster; the other half to him. Sister Martha was ten years older, and a good deal of an invalid. She was mainly interested in her two gray parrots and a mission college for girls in Korea.

I got this dope about him from Purdy Pell, who'd known him ever since T. Walker had joined the Union League. In fact, they'd always been quite chummy, noddin' to each otber real cordial at the club, and exchangin' dinner bids at least once a year.

So he was one of the last parties I'd have looked for to blow into tbe Studio and date up for a private course. I expect he'd heard how I put Purdy Pell back into condition when the specialists wanted to shoo him toward Battle Creek. It was a case of tight vest buttons and puffy breathin' with T. Walker. And inside of two weeks, just by tossin' the ball and stunts on the apparatus, I had Mr. Wells breathin' deeper and leakin' freer than he'd ever done in his whole career. Also, I had that Madison Avenue crust of bis cracked in several places. By degrees we was gettin' almost chummy.

"Do you know, Professor," he breaks out one day after he's had a cold shower and comes out of tbe dressin' room with the pink still showin' in his face, "this is doing me a world of good. Why, life is beginning to seem worth living."

"Why not live it then?" says I.

"By George!" says he. "Why not? But I—I don't know how, I suppose."

"Maybe there is something in that, too," says I, careless.

"One drops into a rut without realizing it," he goes on. "I've no doubt I have."

"It's feather-lined, anyway," says I.

"Yes, but—well, I'd like to get out," says he. "I would, really."

"Why not take a runnin' jump?" says I, yawnin'.

But T. Walker only shakes his head, and the subject is dropped. It's only a day or two after that he taps tbe confidential vein again.

"You know," says he, "even real estate can be interesting at times. I've been looking into things at the office a bit closer lately, and I find that tenants are odd,



There, sittin' close together and talkin' away real earnest, is T. Walker and this tall youngish-lookin' woman

some of them. There is one who rents a store from us, way down on Eighth Avenue somewhere. Buys and sells second-band furniture. We've had a lot of trouble with him about the rent. He's always behind. No wonder. Second-hand furniture! What a wretched business! Ugh!

"But he writes the most plausible letters, forever promising to pay up if we will give him a little more time to put through some vague schemes of his. Six months ago he offered a mortgage on his stock if we would advance him a few hundred dollars. I told the agent to do it. Well, he hasn't paid even the interest on the money.

"My people advise foreclosing, getting rid of him. But now be writes that he is about to take in a partner with plenty of capital, and if we will only wait until the deal is made he can settle in full. I—I've a good notion to go down and investigate for myself. Not as executor of the estate, you understand, but as—as—"

"In disguise?" says I. "Sleuth stuff?"

"That's it!" says T. Walker. "In disguise. I hadn't really thought of that. But just how, now, could I do it?"

"Why," says I, ironin' out a grin, "you migbt hire a masquerade costume and go down as a Spanish bull figbter, or in one of these Pierrot clown outfits. But it would be simpler to forget to shave some mornin', dig out an old suit, leave your pearl-gray gloves in tbe drawer, and just naturally stroll in lookin' for a four-piece bedroom set or something."

"By George!" says T. Walker, his pale blue eyes livenin' up.

And the first thing I knew I'd been taken on as consultin' expert in this grand adventure of his. After three days' plannin' and rehearsin' he drives down in a closed taxi for me to inspect the result.

"What do you think of the suit, eh?" he cbuckles. "One I haven't worn for years—last season's straw bat, too. How about the whole effect?"

"Well," says I, "you ain't rough enough so they'd run you off Fiftb Avenue, but I guess you won't cause any riot on Eigbth. You'll pass, I expect."

"I am going to say that my name is Smith," says he, "Thomas Smith; and I shall ask to see some three-quarter iro beds. Then, if I can get him to talkin I'll ask about this new partner of bis."

"Smooth stuff!" says I. "You ought t be in the Secret Service."

I can't say I was all nerved up over thi scoutin' expedition of T. Walker's. I fact, after a smile or two, I must hav switched my mighty intellect toward othe things. So I'm a little surprised when b comes rushin' into the front office alon about closin' time that afternoon an announces brisk:

"What do you think, Professor? I— did it!"

"Eh?" says I, starin' puzzled.

"Passed myself off as Thomas Smith," says he. "I don't believe be suspected m for a moment."

"Oh, yes!" says I, gettin' the connectior "Well, well! Without the aid of fals whiskers, too. Did you find out anything."

"Everything," says T. Walker, spreadin out his bands dramatic. "And say, Pro fessor, do you know, there wasn't a word o truth in that man's story about havin taken in a partner. He's just looking fo one, and he basn't a cbance in the world c inducing anyone to invest in sucb a mise able business. Really, his store is th most hopeless place—dusty floors, ding windows—and full of the worst lot c rickety old furniture you ever saw. Oh quite impossible! But he's rather an in teresting old rascal. English—that is, fron the Island of Jersey. He's been everywhere done all kinds of things: ten years in th British army in India, as band major; the head steward on a P. & O. liner, unti the ship was wrecked in the Red Sea. Once he ran a fried-fish house in London later an English coffee house in Cairo. H has met all sorts of distinguished persons— Lord Roberts, Henry Irving, Gladstone Knew Lilly Langtry when she was a girl. H came to the States, he told me, with a Punch and Judy show.

"Of course, I presume a lot of it wasn't true But he's an entertaining talker. I had te witb him. Oh, yes. He lives in some upper back rooms with his daughter, a widow wh has two rather nice-appearing youngsters A Mrs. Farning. She used to be a concert hall singer. Rather bright, too. We hac toasted muffins and jam, and Majo Jeffrys—they call him Major, you know— played tbe clarinet."

"Some party!" says I. "What wa happenin' to the store all this time?"

"Oh, he locked it up," says T. Walker "Does that whenever he feels like it He's quite a fisherman. Goes down t Jamaica Bay frequently after flounders and eels. Wants me to go along some time 'I'll show you some real sport, Tom,' says he. Think of that! Inside of an hour he was calling me Tom. You can't imagine how odd it sounded and seemed. Why bere I've been doing the same things da after day, year in and year out, seeing th same people, saying about the same things and then, just like that, I am someone else —Tom Smith—a different person entirely.'

"Ye-e-s?" says I. "But it's all over, eh?"

"I suppose so," says T. Walker. "Still— well, you see, I did drop a hint that I might go in with him—silent partner, of course—just to get him to talking."

It was next week that Mr. Wells skips two sessions at the gym, and I was wondering what had become of him when he drifts in again one afternoon in his Eighth Avenue disguise.

"Listen, Professor!" he begins. "This is in strict confidence. I—I've done it. I'm half owner of a second-hand furniture store. I've been living down there fo four days. My sister thinks I'm in Philadelphia looking after some of our business interests. And all the while I've been right on Eighth Avenue, helping run the store. You should see what I've been doing. Why, I've had two women and a man at work scrubbing and dusting. I've had the windows cleaned and a new sign lettered. Yes—'Jeffrys & Smitb, Used Furniture Bought and Sold.'

"The Major is taking hold of things, too. Of course, he's not a good business man. Forgets what things cost, and is a poor salesman. But customers like to hear him talk. I'm getting so I can talk to people myself— all sorts of people. It's no end of fun. They tell you their troubles; you get acquainted with them. I'm almost used to being called Mr. Smith. [CONTINUED ON PAGE 41]

Better Babies

HERE are a few more letters to let you know what women who are joining the ever-increasing ranks of the Expectant Mothers' Circle and of the Mothers' Club think of the service they are getting:



"Want a bite?"

"I JUST want to join the great list of young mothers who have found such help and comfort in your monthly letters. Many times I have wanted to write before, but I was too busy—the same ancient excuse, you know.

"Only a matter of a week or ten days now till I hope to have my own baby in my arms, and, if realization is better than the hope, then I'll be wonderfully happy. For these have been nine months of joyful anticipation, and only once has there come a suggestion of fear as I approach this as yet untried path. But a quiet trust in God, a loving husband's unfailing devotedness, and your confidence-inspiring letters have done wonders, and I thank you from a full heart.

"Of course I want to join the Mothers' Club as soon as our little one arrives, and intend to send the card you sent to be filled in, as soon after baby's birthday as possible." *Mrs. W. A. A., Canada.*

"YOUR preliminary circular arrived, and I am enclosing 50 cents in stamps, to cover fees for membership in your Expectant Mothers' Circle. I have enjoyed the literature sent so much, and shall look forward with interest to the letters.

"Mine is indeed a great privilege, and I want to meet it with all the courage and knowledge possible. Having been a kindergartner, I have always been interested in children; but, of course, now the interest is of a far deeper, intenser sort, and both my husband and I are highly appreciative of the fact that splendid women of experience and thorough knowledge are promoting this Better Babies movement, and that through it, and through the government bureau as well, we may get wise, safe counsel.



"Great heavens! Can't you leave me alone a minute?"

"Good doctors, hospitals, comfort, and care are all within easy reach, but I shall treasure every pamphlet sent me because they are short and interesting, and can be read and reread as one stops to rest. It will be like having a friendly doctor who is interested in the threefold nature of our baby with us constantly.

"Your course of reading was recommended by a well-known doctor of Seattle. I am heartily interested in your work, and wish for it and all the mothers and babies it may reach the best of success and happiness." *Mrs. D. L. W., Washington.*

"ENCLOSED please find 50 cents in stamps to cover postage on letters regarding the care of our better baby boy who has arrived to gladden our hearts.

"I feel sure that I'll need your advice in raising him just as much as I needed your kindly instructions and cheerful thoughts before he came.

"I can never thank you enough for the comfort and help I got from those expectant mother letters, for during the whole nine months I wasn't sick a minute.

"I am by nature a very active person, and by following your instructive letters we have a healthy, happy baby boy.

"This is my first baby, and the doctor and nurse say I got along beautifully; really, I felt so much better afterward that I hardly realized it was all over. But the confidence I placed in your letters is what helped me so much, so will you please send me my mother letters soon, as I feel our little one will get much help from them?

"May I thank you again for your past kindness, and may I soon have the great pleasure of reading the mother letters?

"One mother that you have helped *most* wonderfully." *Mrs. S. J. S., Kentucky.*

"MY LAST letter is about due—and, oh, how sorry I shall be when they stop coming! They are such a help and comfort to a new mother, and I only wish *every* new mother could know about them. When I came home from the hospital with my precious bundle I hardly knew what to do with it. I really do not know how I managed until your first letter came. I wrote for the letters just as soon as I possibly could, and each one has helped to solve some problem that confronts the new mother.

"My baby is truly a Better Baby, and with God's help and good care I trust she will become a Best Baby. She only weighed five pounds nine ounces at birth, but to-day, at eleven and a half months, she weighs over nineteen pounds and is as healthy as can be; and I assure you she can compete with any baby in the neighborhood to-day.

"I thank you for your courtesy, and sincerely hope your wonderful bureau may prosper and last forever."

Mrs. M. M., Massachusetts.

What the Better Babies Bureau Is

And how to secure its help

THE EXPECTANT MOTHERS' CIRCLE: Any woman eligible may become a member, receiving each month a letter of advice on the care of herself and the preparation for her baby. Several practical little pamphlet circulars showing designs for maternity dresses and a common-sense layette are some of the helps sent with the letters. No matter at what period you enter, everything from the first month will be sent. No mention of the Better Babies Bureau is made on the envelopes in which the material is mailed. Enclose a self-addressed envelope with *Fifty Cents* in stamps, for postage, *and state what month you expect your baby.*

THE MOTHERS' CLUB: Every mother of young children is eligible. Pamphlets, together with monthly letters of instruction on the care and feeding of babies *under one year of age* (covering such subjects as colic, constipation, weaning, teething, etc.), will be sent to any mother who sends *Fifty Cents* in stamps and states the age of her baby. There are also leaflets giving diet lists, and other helps for babies from one year of age to three years. This literature is all included in the Mothers' Club's monthly service, but if the letters are not desired the additional literature will be sent for *Ten Cents*. A self-addressed stamped envelope will bring a prompt reply to every inquiry. Address all inquiries to

BETTER BABIES BUREAU

or to Mrs. Caroline French Benton, Counselor

FARM AND FIRESIDE 381 Fourth Avenue, New York City.

Remove the Film

From Your Teeth— Then Look at Them

All Statements Approved by High Dental Authorities



Let Your Own Eyes Tell

THIS is to urge a free ten-day test of a tooth paste which combats the film. See the results and then decide if filmless teeth will pay.

That slimy film which you feel with your tongue is the cause of most tooth troubles. The tooth brush alone doesn't end it. The ordinary tooth paste does not dissolve it.

It clings to the teeth, gets into crevices and stays. That is why teeth brushed twice daily still discolor and decay.

That film is what discolors—not the teeth. It is the basis of tartar. It holds food substance which ferments and forms acid. It holds the acid in contact with the teeth to cause decay.

Millions of germs breed in it. They, with tartar, are the chief cause of pyorrhea. So, despite the tooth brush, all these troubles have been constantly increasing.

Dental science has found a way to combat that film. The way is now embodied in a dentifrice called Pepsodent. It does what nothing else has done. That is the tooth paste we ask you to try—use a ten-day tube at our cost and see the results for yourself.

You Do Not End the Film

Your present methods remove food debris, but they do not end the film. So teeth discolor and tartar forms. Wherever the film is, decay may follow.

The use of Pepsodent applies pepsin to the film. The film is albuminous and pepsin is the digestant of albumin. The object is to dissolve the film, then to constantly combat it.

Pepsin long seemed impossible. It must be activated, and the usual agent is an acid harmful to the teeth. But dental science has now discovered a harmless activating method. And that has made the constant use of active pepsin possible.

Clinical tests under able authorities have proved the results beyond question. Leading dentists all over America now urge the use of Pepsodent. It is keeping millions of teeth white, safe and clean.

Now we ask you to prove it.

PAT. OFF.
Pepsodent
REG. U. S.

The New-Day Dentifrice

A Scientific Product—Sold by Druggists Everywhere

Send This Coupon for a 10-Day Tube

Note how clean the teeth feel after using. Mark the absence of the slimy film. See how teeth whiten—how they glisten—as the fixed film disappears.

Do this and then decide between the old ways and the new. Cut out the coupon now. (230)

Ten-Day Tube Free

THE PEPSODENT CO., Dept. 720,
1104 S. Wabash Ave., Chicago, Ill.
Mail 10-Day Tube of Pepsodent to

Name .....

Address .....

School Methods We Use to Make Young Folks Good Business Farmers

By Edward J. Tobin

Superintendent of Schools, Cook County, Illinois

THIS is the story of the system of child education which my associates and I have worked out in the Cook County, Illinois, schools. It gives the children the fundamentals of good farming, good business, and good citizenship at the same time that it educates them in their regular studies. It does this in such a way that the children enjoy it, make money out of it, and are ready, when they finally graduate, to step right into the practical affairs of life, equipped to become happy and cheerful men and women.

It teaches them honesty, industry, politeness, economy, methods of production, marketing, cost-finding, business practice, and banking. And it imbues them with a true love of farm life.

The plan could easily be applied to your own county schools by your own school people, if you wanted to use it.

The idea of this work as an adjunct to the study of books in the schools came to me as a result of my own experience and observation.

I was born on a farm, and learned to do all the chores that every farm boy has to do. Later, during the few years I taught rural schools in my home county in Wisconsin, I thoroughly believed that it was my business to teach my pupils books, and nothing else, to make scholars of them. I was not alone in this belief. All my farmer patrons solemnly accepted the view that scholarship or book-learning was the chief end and aim of education.

But when I went to Chicago to teach, and got a bigger, broader view of the world of industry, I began to see light. All around me were men and women doing big things which required initiative and vigorous, original ideas. I discovered that, although many of them had only a limited knowledge of books, hand and brain and judgment were highly trained to do the world's work efficiently. I began to realize that the schools must teach pupils to produce, to create, to achieve, as well as to absorb knowledge from books.

In Cook County every child above the fourth grade in the rural and small-town schools must earn one achievement credit a year by completing a school-home project course. This credit adds from ten to fifteen points to a pupil's academic average, and without it he cannot pass from grade to grade.

What is an "achievement credit" and what a "school-home project?" Any Cook County pupil can tell you that they mean doing your home chores with the eye of the entire school system, from teacher up to county superintendent, upon you. In other words, the Cook County schools have two distinct courses: the "studying" course and the "doing" course. We maintain that it is just as much the duty of the school to teach the children how to *do* things as how to study *about* things, otherwise they cannot develop initiative and practical independence.

To teach the art of doing we must go outside the school, into the home, the garden, the shop, the factory—wherever a child works or expects to work. We believe it is just as much a part of education to perform a humdrum chore efficiently as it is to learn the multiplication table.



The man in his shirt sleeves is Mr. Tobin

Five years ago we began to blaze this new trail. We organized the county into five divisions, each under the supervision of a so-called country-life director. At first the pupil could take his choice of six projects: field and garden, poultry-raising, cow-testing, cooking and sewing, business, and music. Later we added canning, wage-earning, and keeping a pig, calf, or sheep.

Co-operation with the parents is the solid foundation on which our system rests. When a boy decides to plant a field of his own, he is told by his teacher to consult his father, who advises him as to the kind of crop to raise, what seed is best, and how to plant and cultivate. It is his father who rents him the little plot of land for the venture—for it is the law of the system that every project must be conducted strictly on a business basis, and must pay its own way, if possible.



A calf-club member

With the aid of the country-life director and the teacher, the boy measures his land, hoes and weeds his crop, and harvests it, keeping account of every penny of expenditure, as well as the net income derived from it. For the latter purpose he is given a small red record book, in which debit and credit items are carefully recorded. At every visit of inspection the record book must be produced, and signed by the visitor, and great is the chagrin of the boy if he is caught with his accounts not up to date.

Right here let me say that the value of these visits of inspection cannot be overemphasized. By taking the teacher and the country-life director straight into the home, our system brings about that close alliance between the school and the home which educators have for years been vainly trying to achieve.

In more than one project the account-keeping is a man's-sized job. The poultry-project youngster, who raises chickens, must keep a daily egg record; the cow-testing boys must carefully compute the weight of the milk, its percentage of butter-fat, the value of the butter produced, the weight and cost of feed consumed, and similar data; the field and garden lads and lassies thriftily reckon with every radish and potato they sell.

The rewards for the faithful discharge of such responsibilities are all the most ambitious pupil could ask. First, he gains the dignity of being a worker and a money-maker, and of investing the proceeds of his toil in necessary clothes and books; for wise investment of returns is one of the most strongly emphasized features of our system.

Second, at the end of each school year he receives one achievement credit for successfully completing each project. Third, with his first credit goes an "achievement emblem," in which is welded a silver star for each succeeding credit, the emblem being complete with the awarding of eight stars. Fourth, he receives the cash profits of his enterprise, which are not to be despised, as may be seen from a random study of returns from different projects. For example, one young hustler reports a net profit of $120.33 from an acre of sweet corn; another, $73.75 from a brood of 89 chickens; a third, $180.10 on 100 square rods of potatoes and onions; a fourth, $273.75 from a little more than 76 square rods of tomatoes.

These opulent returns, of course, come from the older pupils, as the younger ones begin on a smaller scale, suited to their limited abilities. No youngster of less than ten is considered mature enough to carry through a project unless he qualifies on the strength of sheer, nervy ambition, as did one youngster of the never-say-die type. Fired by the achievements of his older brother and sister, he begged his teacher to let him join, but she refused on the ground that he was too young. Nevertheless, the little fellow went ahead and planted his garden, sold his vegetables, and kept his books, and at the end of the season showed a profit on his project. Needless to say, the rule was stretched, and he was admitted to the club.

How do our school farmers market their crops? Many of them set up roadside markets along the highways to Chicago, and automobile loads of city folk gladly buy their fresh vegetables and poultry. Last season, on several occasions, the young merchants thus disposed of $200 or $300 worth of vegetables in one afternoon.

Another angle of the school-home project is the school community fair, held on the school grounds. Coming in the fall at the end of the season's harvest, it offers the pupils a place to display their handiwork, with a chance of carrying home a premium for superior beans or buttonholes, pigs or popcorn.

There is no group more enthusiastic than the canners. When the system was first adopted, canning was not in the program. But a poor season and a dull market forced the issue on the teachers.

"I saw the gardens failing," said one principal. "Peas, beans and tomatoes were not of a grade to command good prices, which meant discouragement for the children. So I organized a canning club of twenty-eight boys and girls, and held canning parties at my house of evenings, making semi-social occasions of them. We can very largely for the market, and the canning project is the biggest thing in our district."

Canning records in the various schools are almost as much a matter of local pride as football scores and batting averages in the field of sport. One small school reached the enviable height of 3,304 cans in one season. As for individual records, one little girl canned a total of 496.5 quarts of fruit and vegetables in one summer.

The net profits of many a Cook County pupil testify eloquently to the purely cash-value aspect of our system. During the season of 1918 the children of one of our divisions earned a total of $10,939.17, net.

Yet these monetary returns are the most insignificant part of our educational harvest, serving mainly to fire the enthusiasm of the pupils. What about the practical training of hand and brain, which is the foundation of productive, self-sustaining citizenship? What about the returns in character-building? These are the great questions at issue.

In answering the first I would say that we consider *education* and *life* as identical. If a boy is raising a pig we teach him all the fine points of feeding and proper sanitary care. He learns that his charge must be fed in a clean place and have clean water, as water holes are cholera breeders, and that it must have a balanced ration, with plenty of green things, such as soybeans. He learns that it is good business to turn a hog into a field and let it husk the corn, instead of leaving the corn for human huskers. He later goes to his arithmetic class and solves problems based on the feeding and monetary value of his pig. In his language class he writes the story of his project from the wealth of information he has acquired in the care of his pig.

All around him are his mates applying in their various classes the lessons they have learned in similar projects: solving problems based on their crops, studying the composition of soils in their gardens and the food properties of their canned products, absorbing geography from the sewing class, where the complete industrial history of cotton and linen may be followed from the field to the loom. Meanwhile, no pupil escapes the priceless training in punctuality, faithful service, and efficiency which comes of making good at such a job as fattening hungry Orpingtons or Durocs, or making two carrots grow where only one grew before.

It is these lessons that are slowly but surely doing the work of *character-building*, which is, after all, the big thing in education. While the growth is usually neither swift nor spectacular, yet we occasionally handle cases of genuine mental and moral awakening, directly due to the operation of the school-home system.

One of our country-life directors found a certain boy making trouble in one of her districts, and formed a poor opinion of him during her visits to the school. The next year, under a better teacher, the school-home projects were started, and the boy had an acre of corn. Visiting his home that year she found him transformed into a well-mannered and likable lad, deeply interested in his project, which was a success. He is now one of the most promising pupils in the school.

Another director encountered a similar case rather more difficult to handle. The boy was extremely backward, yet he was a leader among his mates, was captain of the football team, and an enthusiast in all sports. The director, seeing good material in the lad, urged him to have a garden as a project. The boy was skeptical as to the paying qualities of a garden, but finally consented to take up the work. His success was prompt and overwhelming. He raised onion sets, and cleared $150 the first year. At the end of the second year his gross sales on an acre of onions amounted to $400.

By that time his school work had greatly improved, and he was in the eighth grade. Then the director and the teacher prevailed upon him to enter high school—a thing he had never intended to do. He was persuaded to stay two years in high school, where he made a good record, even improving his English, which was his weakest point. Meanwhile he had gone into partnership with his brother in truck gardening, working at it during the summer. He has become an authority on the raising of onions, and people who wish expert advice on onion culture are always referred to him. Our system is broad enough and human enough to enable the parents to share it. We hold farmers' institutes which the farmers widely attend and in which they take an interested part. We teach and encourage the buying of fertilizer among the children for the gardens, and the idea goes directly to the parents. In one district the board of education bought two carloads of manure and crushed limestone, and sold it to the farmers at cost.

Sometimes the school does valuable pioneer work in crop-raising, from which the parents benefit. In one locality, for example, it was not known that garlic was adapted to the soil until the school children began to raise rows and rows of the fine quality in their [CONTINUED ON PAGE 3



A successful poultry-project boy

You'll Like Some of These for Dinner

CELERY CROQUETTES — One cup mashed potato, three-fourths cup finely ced celery, one to one and a half teaspoons tter, two tablespoons chopped nuts, nch of salt. Do not cook celery, mix all gredients while the potato is hot, cool, ape, egg and crumb. Stand in a cold ace until ready to bake. Bake in a quick en ten minutes, or until croquettes are own.

CHERRY AND CREAM CHEESE SALAD—lect a cream cheese and mash well with ork, adding a few drops of cream. Season th salt and paprika and stuff with chosen raschino cherries. Arrange on lettuce ves and serve with French dressing.

FRENCH DRESSING—One-half teaspoon t, one-fourth teaspoon pepper, two blespoons vinegar, four tablespoons olive . Mix the ingredients, and stir until ll blended.

STUFFED POTATOES—Choose six potaes of equal size and good shape. Scrub em clean, and bake in a moderate oven til soft. Then cut a piece from the end each, and with a teaspoon scoop out the ides without damaging the skins. Mash s pulp smooth, and put it into a basin; d five tablespoons chopped, cooked ham meat, pepper, salt, and paprika to taste, e tablespoon chopped parsley, and bind together with a well-beaten egg. Refill skins with this mixture, sprinkle over h cracker crumbs, dot with butter, and urn the potatoes to the oven to reheat. ve hot, garnished with parsley.

BAKED SQUASH—Cut the squash in ces for serving. Remove the seeds and ingy portion, brush with molasses, and son with pepper and salt. Bake until t, add butter, and serve at once in shell.

BAKED HOMINY—Four cups hominy, o cups white sauce, one cup chopped m, one-half teaspoon salt, and one-half spoon paprika. Canned hominy is exlent to use. Mix with white sauce, add soning and chopped ham. Stir in thorghly, and bake in a moderate oven.

IN COOKING PARSNIPS, slice them roundse, and place in a kettle, with slices of sh pork laid over them; add salt, a dash cayenne pepper, and water to cover em, and simmer slowly for a while. hen they are tender sprinkle a bit of ur over them, and again cook slowly, til, when the meat and parsnips are moved, there will be a rich gravy in the ttle, to be eaten with them or separately, desired.

To Launder Collars and Cuffs

SINCE I live on a farm and am quite far removed from a laundry, I always up the stiff collars and cuffs at home. using starch jelly I am able to secure st as high a gloss as that obtained at the ndry. The following are the proportions ich I use: two tablespoons starch, e-quarter cup cold water, one cup boiling ter.

I add the cold water to the starch and ake a thin mixture without lumps. Then add the boiling water slowly, stirring nstantly, and allow it to boil up.

After I have my jelly prepared I lay t the collars and cuffs which have been shed and dried and apply the jelly with soft cloth, rubbing in thoroughly on both les.

If they are to be very stiff I allow them dry, repeat the process, and roll them in a towel while still wet. In twenty thirty minutes I iron them first on one le and then on the other with an iron bbed with paraffin, until perfectly dry d glossy.

If a very high gloss is desired I rub a mp cloth over them and again press til perfectly dry.

When washing articles which I do not re to have especially stiff I generally use e cold-starch method, which is somenat simpler: two tablespoons starch, one-lf teaspoon borax, two cups cold water.

Add the cold water gradually to the arch. Mix well, and add the dissolved rax. Dip the article in the solution and b well, repeating the process several nes.

With a cloth remove all surface starch, ll up in a cloth, and allow to stand over ght. Iron according to the directions ven for starch jelly.



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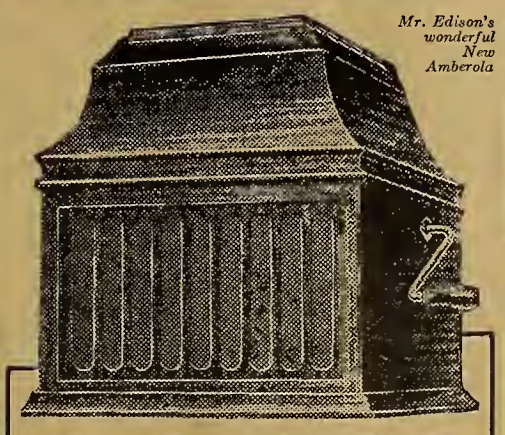
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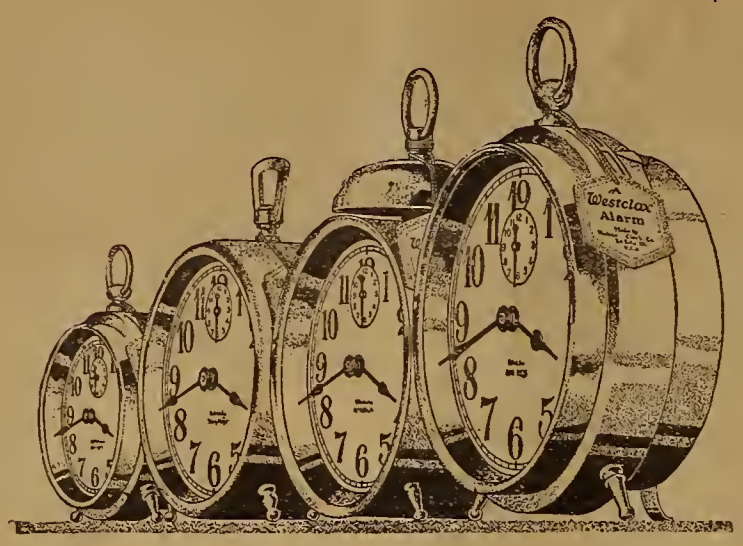
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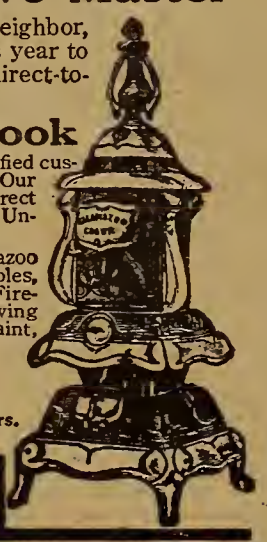
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How I Use the Cheaper Cuts of Meat

By Edith M. Updegraff

SINCE meat fills such an important place in the diet, and also since the price of meat, as of other foods, has greatly advanced, I find it is necessary to use my meat to the very best advantage.

I use the cheaper cuts of meat to excellent advantage by taking more thought in their selection and preparation. And I have found them to be as nutritious and as digestible, if properly cooked, as the higher priced cuts.

The cooking of these cheaper cuts is all important. In all meat there is a course fiber, and, if this fiber is not properly cooked, we find the meat is tough, not appetizing, and very indigestible.

I cook the tougher meats, which are usually the cheaper ones, very carefully at low heat for a long time, in order to soften this fiber, for boiling at high heat will make meat very tough. Meat may be cooked at low heat in many ways—on a gas stove, the back of the range, or the "simmerer," and a fireless cooker gives that low, slow heat. One of the best ways, I find, is to place meat in an earthen dish and cover. Most of us are familiar with these casserole dishes.

When I desire the flavor left in the meat I sear the outside of the meat in either hot fat or in boiling water before beginning the slow process of cooking. If I wish to use the liquid or broth in which meat has been cooked, and am not particular as to the flavor of the meat, I put the meat in cold water, as this draws out the juice, which gives soups, broths, etc., their excellent flavors.

One means I have of cutting down the waste in the use of meat is to use up as much as possible of the bone, fat, and trimmings. When I buy a specially trimmed roast I see that I have all scraps of meat, for these are valuable. I render the fat and use some in cooking in place of butter or lard. The trimmings make rich broth for soups. In boiling or cooking spinach, cabbage, beans, etc., I use the fat broth that comes from boiling a ham, pot roast, pork roasts, etc. I find so many uses for this so-called waste.

Besides using these proper methods of cooking meats to increase the flavor, I usually add other flavors. For, after all, it is not so much the difference in texture and nutrition between a high and low priced meat, but more in the difference in flavor. I add different flavors to the meat by using vegetables, such as carrots, onions, celery; herbs, such as sage, parsley, bay leaf; spices, curry mixtures or highly seasoned meat sauces, and broths. These give the meat a very fine flavor, give it variety, and make it more appetizing.

One way I have discovered of making the cheaper steaks more palatable is to pound and sprinkle with flour, sear on top, then place in oven and steam. This increases the flavor and makes them more tender.

In using most cheaper cuts of meat I make them into croquettes, meat balls, mock cutlets, etc. I also use them with dumplings, cooked with vegetables, and in so many other attractive ways. If we housewives intend to have as palatable dishes as those made from higher priced foods, we must spend more time in buying, preparing, and cooking these foods. I believe the test of a good cook is not so much in fixing up pretty, fancy meals, but in preparing attractive and wholesome dishes from the less expensive foods.

Swiss Steak

1 flank steak
1 cup buttered crumbs
1 cup tomatoes
1 teaspoon onion juice
1 pint hot water or stock
1 tablespoon lemon
1½ teaspoons salt
Speck pepper
Speck nutmeg
Speck cloves

Score steak on both sides; rub into it the seasonings. Mix bread crumbs and tomatoes, and spread over one side of steak. Roll and skewer, sear, place in casserole or covered earthen baking dish. Pour in water or stock, cover closely, and bake in a slow oven for one hour. Lift steak from casserole. Thicken stock and pour over steak. One cup of cooked macaroni or spaghetti may be added to steak while cooking. This makes a good one-dish meal.

Veal Birds

Use three-inch squares of round veal or beef. Spread each piece with stuffing which has been well seasoned; stuffing should not be too moist. Roll, skewer with toothpicks, roll in flour, and sear first in hot fat. Place in baking pan, half cover with water and milk, and bake slowly for one hour.

Mock Cutlets

3 cups chopped meat
3 cups cold boiled rice
Meat stock or milk to moisten
Salt and pepper

Mix meat and rice and liquid together. Season highly with pepper and salt. Shape like cutlets, making one end larger than the other; roll in egg and crumbs, and fry in deep fat.

Meat and Potato Balls

2 cups cold mashed potatoes
1 egg yolk
¼ cup milk
Creamed meat

Beat egg yolk slightly. Scald milk, pour over beaten egg, stirring constantly. Add to potato, beating thoroughly. Place large spoonfuls in a shallow baking pan. Make hollow in center of potato ball and fill with creamed meat. Heat and brown slightly in oven. Garnish with parsley and serve on platter.

Italian Stew

3 cups ground hamburger
1½ cups cooked spaghetti
1 cup cooked tomatoes
½ cup chopped pimento
Salt
Pepper

Cook hamburger first in frying pan. Add cooked spaghetti, tomatoes, chopped pimento. Season highly, and let cool down slowly until all is mixed thoroughly. A small amount of hot water or meat stock may be added if too thick.

Stuffed Veal Heart

Remove veins and arteries. Wash carefully inside and out. Cook in boiling water until tender. Remove from stove and fill heart with dressing made from bread. Sew up opening, sprinkle with salt and pepper, and dredge with flour. Bake in a covered dish one hour, partly covering with stock in which it was stewed. Thicken liquid with flour, and serve as sauce around heart.

School Methods We Use to Make Young Folks Good Business Farmers

[CONTINUED FROM PAGE 36]

community garden. Whereupon seasoned farmers rubbed their eyes and decided that there was something, after all, which they might learn from their own public schools.

Even in certain quarters, where we found a tendency to resent the idea of "these teachers trying to show us practical farmers how to farm," friendly interest in school-home projects has grown like the proverbial snowball in January. This is especially true in families in which parents, formerly hostile, have discovered that, for the first time in her life, Susie is doing good work because of the zeal she absorbs from her poultry project, and that Tom, who had previously threatened to leave school, is now determined to stay and win an achievement emblem on the strength of his ability to raise beets as big as your cabbages, and seed corn that cleans up all the prizes at the school community fair.

The community fair also offers Mother and Dad and Granddad a chance to exhibit their own products—which may account for its rapidly growing popularity. In the wake of school-home projects have also sprung up such parental interests as community festivals and pageants, school lecture courses, and parent-teacher associations, all of which are helping to teach Mother and Dad and Granddad that "we learn to do by doing" is really education

A "Jack" Supper Party

By Emily Rose Burt

A NOTICE in the weekly paper invited everybody in town to a Jack Supper and Party on Hallowe'en:

Every Jack you know'll be there for you to greet!
Everything for supper will be there to eat!
There'll be lots of funny stunts;
Make your plans to come, at once—
Everybody! Everybody! toute de suite!"

As if this weren't enough to stimulate tendance, the formation was ded that the ject was funds furnish the mmunity cen- r that was eded in the lage.



The town hall s hardly large ough for all the rangements, and e committee al- ost wished they had ed the schoolhouse.

The first Jacks that eeted the patrons were k-o'-lanterns, real and toy es. The imitation ones hung thickly m the ceiling, and gave the necessary llowe'enish atmosphere; the real ones nned from window sills and other van- ge points.

The feature which first attracted interest, wever, was the line of supper booths at e end of the hall. Each had a large sign ove it identifying it, and its attendants re characteristic.

First was Jack Spratt's House. Next to at, Jack in the Beanstalk's, then Jack rner's, and finally Jack Frost's.

Jack Spratt and his wife served cold ced meat and potato salad; Jack in the anstalk presided over individual baked anpots with steamed brown bread ac- mpaniment; Jack Horner sold apple, nce, berry, pumpkin pie; Jack Frost oped out the ice cream.

A certain price was charged for a portion each food, and visitors could move pro- essively from booth to booth till they d had what they wished.

It was possible also to have a Flapjack unter, where a famous local flapjack aker was kept busy "flapping."

Jack and Jill in costume wandered in d out among the throng, dispensing ater from a shining pail. Another Mother ose Jack was popular in the person of andy Spandy, Jack-a-Dandy, with his oth of candy.

After supper, which, of course, was the main object, and in itself proved a great deal of fun, the other attractions of the Jack Party were appreciated. There was, for instance, "Shooting Jack Rabbits." This sport consisted of hitting stuffed rabbits with baseballs at a given range.

Jack-be-Nimble managed a contest which consisted of jumping frontward and backward over a very tall candlestick. The successful contestants were awarded wee wax tapers.

The ever popular grab bag took the form of a real live sailor jacky with his kit bag, which contained jumping jacks and jack-in-the boxes for the youngsters.

Fortunes, without which a Hallowe'en party would be incomplete, were uniquely offered. Large "Jack" roses of paper were fastened to a mock rosebush, and a pretty maid gowned in crimson bestowed these favors in exchange for a nickel each. A little written fortune was concealed in the heart of each rose.

Some of the young folks enjoyed games of jackstraws and slapjack in one corner of the hall, and there was a whittling contest with jackknives.

As people have grown rather tired of the cut-and-dried Hallowe'en party, this affair proved a marked success socially, and brought in a generous sum as well for the community center.

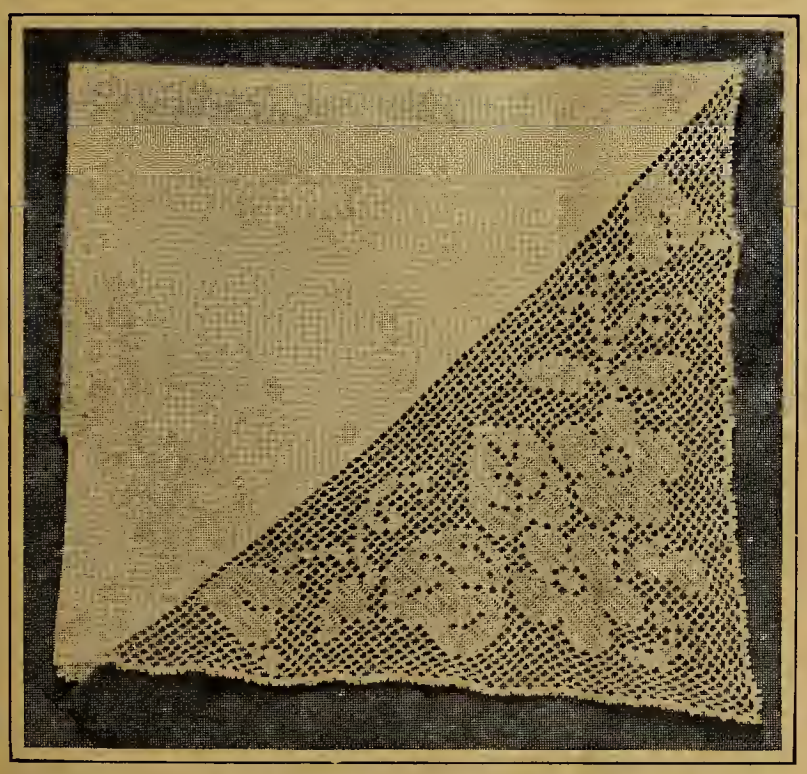
NOTE: Twenty fortune rhymes will be sent on receipt of a stamped self-addressed envelope. Address Entertainment Editor, FARM AND FIRESIDE, 381 Fourth Avenue, New York City.

On Window-Washing

By C. B. Ames

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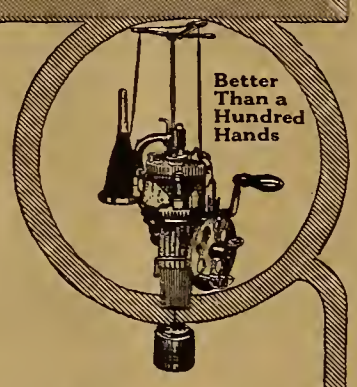
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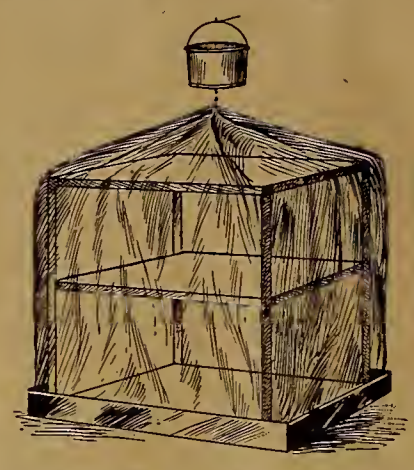
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Helpful Suggestions for the Housewife

An Iceless Refrigerator

OUR most convenient device is a home-made iceless refrigerator. It consists of a wooden frame with top, center, and bottom shelves set on four blocks for feet. It is placed in a pan a little larger than the



wooden shelves, and is then covered with a dripping wet cheesecloth, the lower edges of which must rest in bottom of pan, into which pour water until nearly brim full.

Over the top is suspended, by string, a small vessel with a hole in the bottom, so water will drip from it and percolate down all four sides of the cooler, which must be set near a window or in a current of air.

The square I used was made from a small orange box, because it had top, bottom, and shelf (center partition). From all four sides of the box I removed all boards, leaving only strips for corners. I use a large square baking pan for the water container, giving all a coat of white enamel paint for neatness; but it is so clean and airy that paint is not needed.

The only attention required is to keep top and bottom water containers filled. Be sure drip hole does not get stopped up, for it is necessary that water drips over the cheesecloth covering. The covering must be scalded each morning, and it is best to have two cloths, so that one may be sunning one day and used on cooler the next.

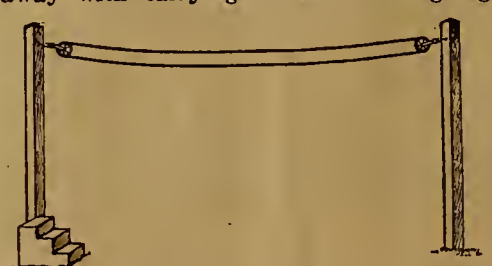
Of course, the pan must have at least two inches of water in it, in which the lower ends of cloth rest, so capillary attraction will cause moisture to ascend sides and meet drip moisture from above. The air passing through cools the food. The taller the container the deeper the water should be.

On the top shelf, under the cloth, I place a covered pitcher of lemonade or a watermelon or cantaloupe, cooling for the next meal, or merely a jar of water to cool—anything to raise the damp cloth from center and cause drops to flow on all sides alike, possibly a little more on the side the wind strikes. *Mrs. A. O., California.*

EDITOR'S NOTE: Canton flannel may also be used for covering the iceless refrigerator; and an old cotton blanket is good. If either of these is used, a pan of water should be set on top of the frame; the cloth extends over the top, into the pan of water, thus serving as a wick or siphon to keep the cover moist.

An Endless Clothesline

ONE of the most simple labor savers I have is an endless clothesline made of two well wheels, one fastened to the corner of screened porch, the other to a post about a hundred feet from the house. The clothesline wire runs through the wheels, and is soldered, making an endless line easily pulled through wheels. This does away with carrying a basket and going



into mud or snow. I simply stand on the step and hang clothes by pulling the line toward me. It is a great convenience for mothers who do their own washing.

Mrs. C. S., Montana.

A Handy Mending Bask

WHEN, without a second's warni my hard-working and efficient lit mother was stricken with paralysis a couldn't even speak for weeks, placing at the helm instantly, a lot of things j simply didn't get done, and nothing pro a worse nightmare than my mending. don't know how Mama ever managed know about everything. I never co find any two essential articles at the sa time, until I happened to discover a la empty peach crate. That gave me an spiration.

I found just a scrap of gay-flowered c tonne, used but not much worn. width covered the crate outside to wit an inch of the bottom, and was confi by an inch of plain, red outing flan also slightly worn. The rest of the creto was used to line the crate about six inc from the top, the bottom of the lining be red outing flannel. Every remaining sc of cretonne was made into a series of po ets around the top for thread, buttons, e and bands of elastic were sewed on to h shears and scissors. All the space is t saved for patches and garments, and ev necessary article is right at hand.

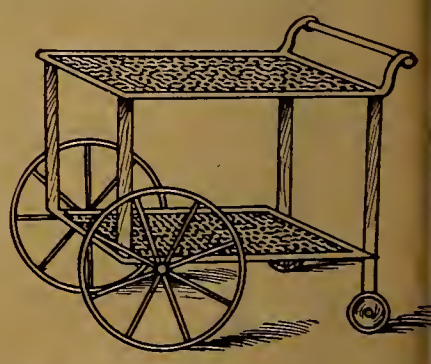
Mrs. E. M. A., New York



A Home-Made Tea Wag

I AM a practical farmer's wife, and I w on the farm besides doing the housew so whatever saves time and labor in house makes that much more time for door work.

We live in an old-fashioned farmho The pantry opens from one end of dining-room, and the kitchen from other end, making a good many st necessary when getting a meal. I had old washstand that was in good condit also the wheels from a baby's gocart. sawed two end legs from the stand just right length, then sawed grooves in end of the legs to fit down over the of the gocart and put small bolts thro the bottom of the legs to hold them



place. Then I put casters on the other legs.

I sandpapered the stand, and nail small railing around the top after cove the top with white oilcloth. Then I the lower shelf in the same way. I sta the stand a dark oak color, and varni it nicely.

Now I put all the things I am goin need in the kitchen, while getting a m on this stand, and wheel it out to kitchen. It makes a very nice little to use there. Then, when I dish up dinner, I put it on this little stand, wheel it into the dining-room, thus sa a good many extra steps. The used d are put on it, wheeled back to the kit washed, and again wheeled to the pa making one trip where I used to ma dozen, thus saving time for other wo

Mrs. M. L. W., Michig

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A Late Start at That

[CONTINUED FROM PAGE 34]

I wish now I'd chosen a different name, something more—er—distinctive than plain Thomas Smith. Makes it rather difficult for me to invent an identity, you know.

"The Major was asking me something about myself only the other day. I had to put him off. But later I decided that I was Thomas Smith from Buffalo, a widower since 1905, no children, and that I'd been a fire-insurance agent up there, but had a chance to sell out and had come to New York trying to trace an uncle who disappeared several years ago. How does that sound?"

"Listens well enough," says I. "What you supposed to be doing now? Time out while you take another look for Uncle?"

"Precisely—a clue from Brooklyn," says T. Walker, alias Tom Smith. "You see, I've rented one of our vacant front rooms—wouldn't they stare at the office if they knew?—I furnished it out of the store, and I'm taking my meals with the Major. Mrs. Farning isn't a bad cook, by the way. A remarkably cheerful person, too—always humming a song. Her little girl and I are getting to be quite good friends. I—I've never known children very well. Interesting, aren't they? She has begun calling me Uncle Tom."

"Well!" says I, gawpin' at him. "Ain't you gettin' in kind of deep with this double life act of yours? How do you plan on squarin' yourself at home?"

"Awkward," he admits. "But I presume I can think up more business trips to satisfy my sister. She'll be rather glad to get rid of me. But Talcott, my man, is quite shrewd. Fancies he's something of a detective. But I mean to fool him."

Yes, he had it all planned out: how he'd slip in late at night, stow his Tom Smith outfit in a locked kit bag, and before he left again give Talcott orders to pack a suitcase for a three-days trip. He'd leave the suitcase here at the Studio until he sneaked home again.

"It's almost as exciting as being a spy," says he.

"Gettin' complicated, though," says I. "After a few more changes you won't know whether you're T. Walker Smith or Tom Wells."

"Yes, I do feel somewhat confused at times," he admits. "And at first I wasn't sure I could stand it down there. Why, I haven't even a private bath! And the man on the floor above rows with his wife. But, really, some of those people are much more interesting than you'd think. The plumber next door tells me about his boy who's in the navy. Read one of his letters to me yesterday. I'm going to buy a nice service flag for him to hang out. Then the Major and I are having quite a cribbage tournament. I'm going to try one of those fishing trips with him next Sunday."

"I think I get you," says I. "Home on Madison Avenue was never like that, eh?"

T. Walker nods.

THIS must have been goin' on more'n a month, and I was seein' less and less of him, when one day comes a sallow-faced, heavy-browed gink into the Studio and asks about Mr. Wells.

"Wells?" says I. "Oh, T. Walker! Why, he ain't been around here in some time."

"Yes, sir. Thank you, sir," says he. "But just where could I reach him?"

"It's by me," says I.

He ain't stalled off by this. Not a bit. Just stands there starin' around sleuthy.

"What's the idea?" I goes on. "Got a habeas corpus or something up your cuff?"

"I am Mr. Wells's valet, Talcott," says he.

"So?" says I.

"Mr. Wells has been away from home for over a week, sir," says Talcott.

"That's nice," says I. "Business trip?"

"So he inferred, sir," comes in Talcott. "But they knew nothing of it at the office of the estate. Besides, sir, he's done this before—and his bag has never been opened. Just as I packed it, sir."

"Mysterious, eh?" says I. "And you think you're on the trail, do you?"

"They told me at the office," says he, "that Mr. Wells often comes here."

"Yes, people do," says I. "But that's no sign I keep track of 'em when they leave."

"But you might guess, sir," insists Talcott, squintin' around.

"That's so," says I. "He might be wanderin' through Grand Park takin' a squirrel census, or maybe he's strayed over to Hoboken and is—"

Just then I followed Talcott's gaze, and find it's aimed over in the corner at the safe. And juttin' out from one side is the end of a suitcase with T. W. W. lettered

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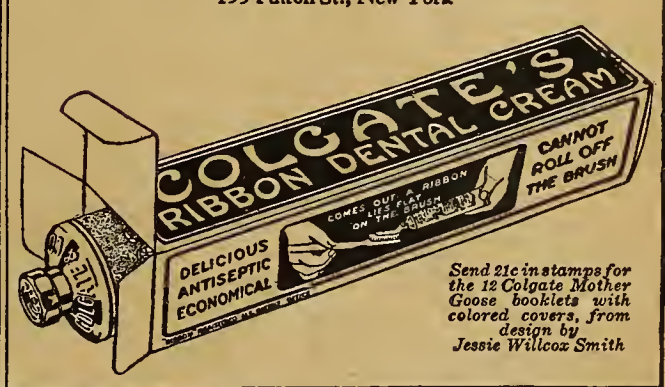
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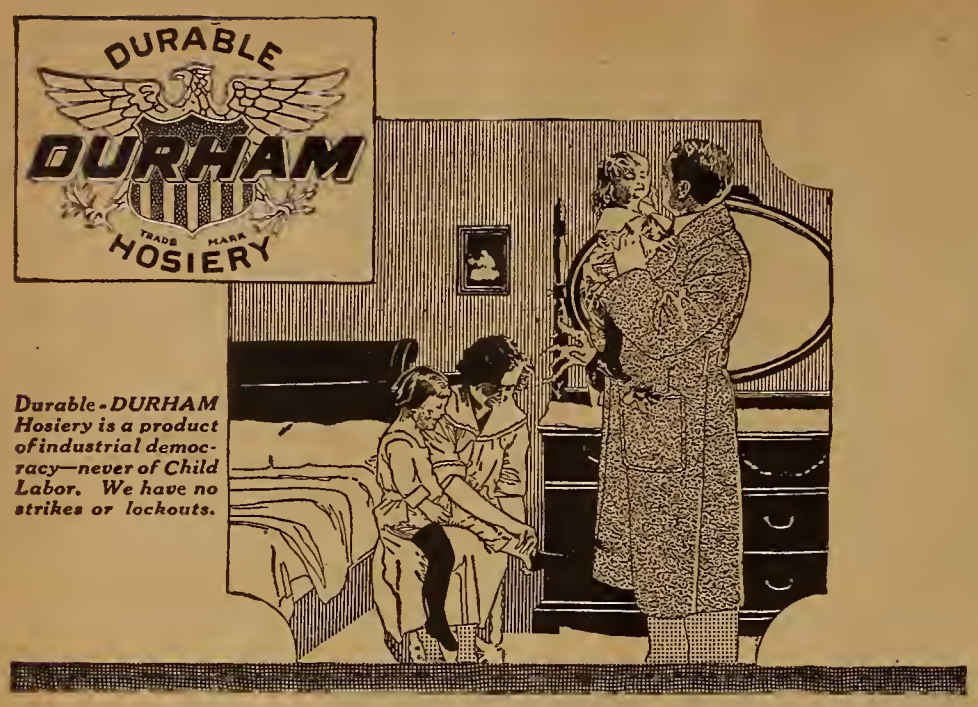
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plain on it. Which was when I does a shift.

"H-m-m-m!" says I. "Course, if it was important—"

"It is," says Talcott. "Miss Martha is quite ill."

"That's different," says I. "And, while I don't know exactly where Mr. Wells is at this minute, I might find him."

It was simple enough to locate this second-hand furniture shop after I'd called up the estate and got the number. And within twenty minutes I was down there interviewin' a grizzly-whiskered, twinkly-eyed old pirate who admits he's Major Jeffrys. And, bein' well posted, I asks for Mr. Smith.

"Tom?" says the Major. "Why, I expect he's up-stairs helpin' Letty lay some linoleum."

"Letty?" says I.

"My daughter," says the Major. "And if it's about that uncle of his you better go right up—two flights, in the back."

"Thanks," says I, not denyin' anything.

I'D RAPPED twice without gettin' any action when I finds the door is open a crack. So I pushes in. Nobody in sight but the cat. Through another door though I has a view into the kitchen, and there, 'sittin' close together on a pine table and talkin' away real earnest, is T. Walker and this tall youngish-lookin' woman with the big gray eyes and the heavy coil of light hair. He's holdin' onto one of her hands.

"Ahem!" says I, clearin' my throat.

They made a quick break-away, and even after he has recovered enough to do the introducin' they're both more or less pinked up. And say, I might as well register right here my opinion that Mrs. Langtry didn't exhaust all the good looks on the Island of Jersey. Even in an all-over apron with her sleeves rolled up this Mrs. Farning is more or less ornamental. Talks well, too, what little she had to say. And as I tows T. Walker out she favors him with a friendly, sunshiny smile that must have been worth gettin'.

Goin' down the stairs Mr. Wells pounds me so enthusiastic on the shoulder and seems so generally chirked up that I holds back the bad news.

"You act like a winner," says I.

"I am, old man," says he. "I've just won the finest woman in the world."

"Flaggin' as Tom Smith?" says I.

"By George!" says he, stoppin' sudden. "I'd forgotten all about that. I—I—suppose she'll have to know the whole thing now. I wonder if—if it will make any difference?"

"If you explain it careful," says I, "maybe she'll forgive you for bein' born on Madison Avenue."

Then I had to tell him about Sister Martha, and how his man Talcott was on his trail. So he hurries right on home just as he is.

Well, seems as it wasn't the finish of Martha; but as soon as she was able to be moved the doctors shunted her off to the White Mountains with a couple of trained nurses. Which leaves T. Walker actually on his own for the first time in years, I expect. He didn't do a thing but make the most of it, too.

Only yesterday he romps into the Studio, all gussied up like a room clerk, and them light blue eyes fairly beamin'.

"She knows the whole story, Professor," he announces. "And you should have seen how sensibly she took it. Doesn't mind a bit."

"And now?" I suggests.

"We're to be married this afternoon," says he, "and start for Bar Harbor to-night."

"Some speed to you, T. Walker, when you finally get into high!" I remarks.

"Wasn't it you who advised me to start living?" he asks. "Well, I have, haven't I?"

"What about the second-hand furniture business?" says I. "Going to keep on with that?"

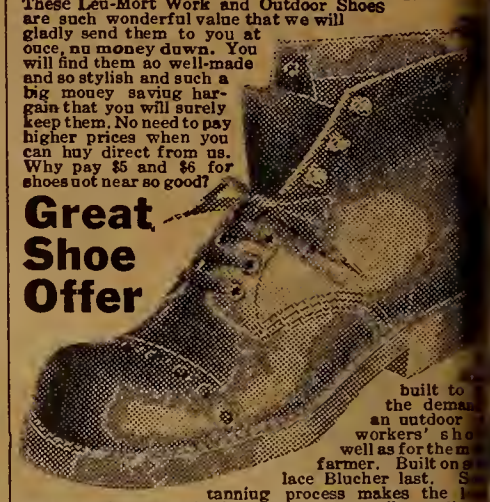
"Oh, no," says he. "I've presented the Major with the whole affair. He's going to close it out and go back to Jersey. The children, of course, stay with us. Won't the old house seem like a real home though, with them in it? You wait. We'll show you."

I'm waitin'. I want to hear how Sister Martha survives the blow, if she does. Also I'm curious to see how Mrs. Wells shows up in the kind of costumes she can buy with some of T. Walker's surplus income. She ought to be easy to look at.

And say, whenever any more treadmill plutes come beefin' to me about havin' had no romance or adventure in their lives, do you know what I'm going' to do? Steer 'em down to Eighth Avenue.

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The Pennsylvania Dutch

[CONTINUED FROM PAGE 9]

landlord and tenant is given by either one until then. When the seed is in—everything finished—the tenant says to the owner: 'Do you want me to stay on?'

"'Yes' or 'No,' says the owner. Not even the scratch of a pen. On the other hand, if the tenant determines to quit he says so—in two words, perhaps."

"I suppose the landlord thinks that if he told his tenant he was going to chuck him he'd skimp the sowing of the winter wheat?" I suggested.

"He might skimp it, as you suggest, provided he were dishonest or if he were going to quit farming. Let us say my man skimps on me: The wheat field shows it next year. Every landlord in this section will note that my wheat looks bad, and they'll know that Jones put it in, and that Jones quit. Result: Jones'll have a hard job to get a good farm, no matter how much money he's got or how good stock. If he's a good man he gets another good farm, and can avail himself of the crop his predecessor sowed. So it's a stand-off."

"What are the terms of the lease in detail?" I asked.

"Roughly speaking, the cost of maintaining the farm is borne about as follows: Taxes are paid by owner and tenant on a 50-50 basis, unless otherwise stipulated. Insurance on all buildings is paid by the landlord, while the tenant insures his own live stock and equipment. All seeds—timothy, clover, and the like—purchased are paid for equally by landlord and tenant. The landlord usually furnishes lime and commercial fertilizer, which is only fair, since this contributes permanently to the soil, and the tenant agrees to haul and distribute same on the land. Sometimes all fertilizer, other than manure and the like, is paid for by both owner and tenant.

"Occasionally landlords stipulate in the lease that they will not pay for fertilizer. But usually the landlord prefers to have this part of the operation in his own hands exclusively, since it leaves him in the position of saying when lime shall or shall not be put on the land. The tenant will not suffer by this stipulation, since it is always to the owner's interest to keep his land from becoming impoverished. And when one considers that lime costs 18 cents a bushel, and takes 50 bushels to the acre, the amount required by an average farm of 90 acres is no mean item.

"The landlord agrees to build all new fences, and the tenant agrees to keep all existing fences in repair. Likewise, the tenant undertakes to keep a free, open, an unimpeded thoroughfare to the public highway for the benefit of the landlord.

"The tenant pays to the landlord, in consideration of the lease for one year, one half of all the grain raised, such as wheat, oats, and rye. And the landlord may dispose of his share as he sees fit, without let or hindrance. So may the tenant dispose of his grain. But it is mutually understood that none of his hay, straw, cornstalks, or manure shall be removed. These must be used for enriching the soil.

"While the tenant has the right to sell all his grain, he rarely ever sells anything but his wheat, converting his oats, corn, etc., into beef, pork, poultry, milk, and eggs, from which he realizes his money. All the manure of the tenant's animals must be put back on the land.

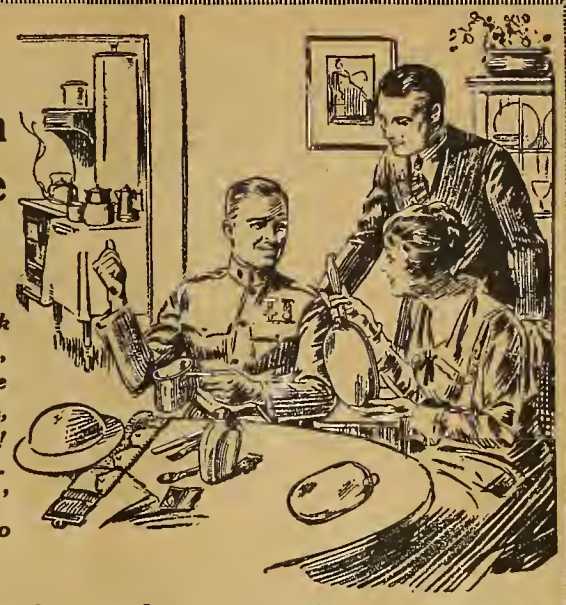
"The tenant has the right to raise garden stuff for his own use on a specified plot, the product of which is his entirely. The tenant agrees to thresh all grain and husk and shell corn at his own expense, and also to deliver the landlord's share at one or two specified warehouses free.

The tenant is so jealous of his reputation that if the landlord shows any suspicion, or should attempt to keep check on him and the tenant finds it out, a good farmer will leave at once.

It is said of the Pennsylvania Dutch farmer that he is so regardful of the rights of others that he will carry his conscientious scruples against trespassing to an absurd extreme. I was told of a case where a pernicious foreign weed was discovered in a certain lot, which threatened to spread disastrously. The owner of this land was away on a trip, and the farmer whose land adjoined would not enter and destroy the weed before it had a chance to go to seed, until he had located the owner and obtained his conesnt to do so.

Now, I hold no brief for any transportation company. But I do most sincerely urge that you and every other farmer in the U. S. A. who can afford it, even by straining a point, make a pilgrimage through Pennsylvania Dutchland. Study the Pennsylvania Dutch farmer's ways, and prosper.

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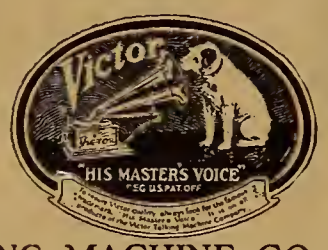
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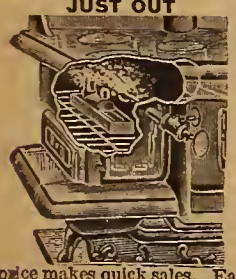


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Making Better Silage With Less Work

By Paris Thompson (District of Columbia)

THAT many farmers make extra work for themselves by cutting their silage too green is clearly shown by a simple bit of arithmetic. Making silage of green corn means hauling a lot of water from the field to the silo, and, furthermore, the nutritive value of the silage per pound is greatly reduced. I have tried this problem on a lot of silage experts who were not convinced until they had figured quite a while for themselves. So get out your pad and pencil and you will be surprised at the results.

the tendency to make the comparison the figures for water per cent instead of figures for dry-matter per cent. A cha from 80 to 60 per cent water seems rat small, but a change from 20 per cent matter to 40 per cent dry matter obvio means, if the total amount of dry ma remains the same, that the total we has been cut in half.

This bit of arithmetic points to an portant lesson in silage-making. The son is to let the water content go as lo



Making silage of green corn means extra and unnecessary work

Now for the silage problem. We will assume a case: Suppose that a field of corn when cut at a certain stage yields 20 tons of ensilage with 80 per cent water content. Suppose we decide to allow the corn to stand in the field and dry out until the water content has decreased to 60 per cent. To simplify the problem we will assume also that there is no further production of dry matter. Such would not be quite the case, but then this is a problem of arithmetic. The problem is, how much would this 20-ton yield shrink in weight with the dropping of the water content from 80 to 60 per cent?

Men accustomed to handling silage all their lives come back as a rule very glibly with an answer. They reason this way: The difference between 60 and 80 per cent is 20 per cent; 20 per cent of 20 tons is 4 tons, and this they figure will be the amount of shrinkage. The problem is not so simple, nor so unimportant. The true solution of it is as follows:

The silage in the first place contained 4 tons of dry matter and 16 tons of water, or 20 per cent dry matter and 80 per cent water. In the second case there is the same 4 tons of dry matter, but only 6 tons of water, or 40 per cent dry matter and 60 per cent water. The silage loses just one half its weight, the 20 tons shrinking to 10 tons. The usual error of course comes in

possible without injuring the silage qua before starting to fill the silo. During period of growth the corn is actually ing in feeding value as well as getting ri an immense tonnage of water. Half labor of hauling may be saved, and a be product secured, by making a rather as against a rather wet silage.

This bit of commonly misunderst silage arithmetic also gives rise to hea arguments over yields of silage corn. T man accustomed to making a dry si takes with a grain of salt the story of tonnage put out by the man who ma sloppy silage, neither party appreciat the fact that shifting the moisture cont from 80 per cent down to 60 per cent about the two extremes encountered actual practice—causes a reduction of j 50 per cent in weight per acre.

The same question is also involved w it comes to feeding. A wet silage has half the feeding value, pound per pou as has a dry silage. All too frequently t distinction is not appreciated when the terial is doled out along the feeding p form. Maybe the milk pail will show the difference, but only a little silage ari metic will point to the cause. It takes pounds of wet silage to give the same fee ing value as 40 pounds with the lower p centage of water—as per the problem w which we started out.

How to Reduce Cost of Handling Fodd

By George W. Brown (Ohio)

ONE of the real needs of our farms today is a more even return of fertility to our soils.

The manure spreader is solving this problem to a certain extent, but we find that the manure spreader is not working out to the best advantage upon many farms, and the seething piles of stalks and straw which lie in barnyards all summer long, are of little value as a fertilizer.

We have often wondered why so many of our farmers work and tug all winter long with great armloads of stalks, paying out long prices for getting this corn husked and the heavy bundles of stalks stored for winter feeding. They are doing it all at a high cost of twine, of husking, and the added labor of handling these stalks to the feed lot and of getting the residue back upon the fields again.

We have just completed the breaking up of 20 acres where we have turned under the stalks just where they grew, and we do not know how we could get a more even distribution of humus, nor a better job of conserving it. There is but little fodder

of value growing upon cornstalks be the ear, so we get busy as soon as the g is glazing, and with sharp cutting kn top above the ears, and bind these bund into the finest feed imaginable for wi feeding in the barn mangers, and have hauling in and out of bulky stalks.

As soon in autumn as we get the snapped we break up the soil, turn under the butt stalks, evenly distribu as they grow, and thus eliminate the h dling of this bulk two or three times dur the winter feeding.

We have followed this plan for seve years, and it works so well for us that are very enthusiastic about it, and wo recommend it to others.

We start our corn-harvesting earlier the fall, for we can commence topping least two weeks earlier than to cut shock, and the ears mature and cure earlier for shucking and cribbing. We store twice as much feed in our barns, we turn the cattle into the fields a topping and shucking, so no feed of value is lost.



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He Found a Tractor Cheaper Than Horses

By A. J. Cavanaugh (Kansas)

AFTER four years of experience with one make of tractor, which I still use on my farm, and two years' experience with other makes, I have decided that a moderate-sized tractor is the best for the average farmer. I prefer a slow-speed, two-cylinder, long-stroke motor of the horizontal type, mounted low in the frame. I want the flywheel as near the center of the tractor as possible. With this arrangement the motor is most nearly balanced, and vibration is greatly reduced.

A good many tractors have given and still continue to give trouble, and there is just as much difference in the efficiency of tractors as there is in horses. But my idea is this: If you were going to purchase a plow horse you would not buy a high-stepping roadster, would you? I think the same idea applies to the tractor. To my notion, heavy gearing and wide drivers are exceedingly important. My machine has very wide drivers, and thus it travels over plowed ground without packing it. And it pulls three 12-hole drills or two 8-foot binders. Some time ago, when the ground was so wet the binder mired down, my engine stayed on top and dragged it out; and I had to drag out both a binder and a tractor for my neighbor. This was easy because of my tractor's wide wheels. My engine has two speeds. I use the high speed for pulling binders, harrows, and drills, and the low speed for plowing or drawing four 16-inch bottoms.

I long ago found that it was much cheaper to operate a tractor than to feed the horses it would take to pull what the tractor pulls.

For instance: Last fall I plowed 50 acres in four days. For this I used 90 gallons of gasoline at 20 cents a gallon, and four gallons of engine oil at 50 cents a gallon, making a total of $20. This, with the wages of one man for four days, makes a total cost of $30 for the work.

My neighbor plowed the same amount of land in a near-by field in twelve days. During that time he fed his horses 30 bushels of oats at 96 cents, $6 worth of hay, and $5 worth of corn. One man for twelve days at $2.50 a day was paid $30, so the total cash cost was $69.80—a difference of $39.80 in favor of the tractor on a 50-acre field, to say nothing of the difference in time required to do the work—and that was, of course, a big item. When there was no more work to be done my tractor was put in the shed, and required no further care and caused no more expense, whereas my neighbor had to feed his horses and take care of them, whether they worked or not.

However, I very seldom stop when plowing, harrowing, and seed-bed preparation is finished, but with my tractor earn good money every fall and winter by grading roads. I generally grade from 40 to 50 miles of road every year, and for this I get $20 a mile. So I usually earn enough by this, each year, to about pay the original cost of my tractor. Could anyone ask for anything better? Where can a farmer make a better profit on his labor and money invested?

With me, repairs have been very light. If a man expects to make a success with a tractor, no matter what make, he must be willing to give the machine good care. I use my tractor for all sorts of work. In addition to what I have before mentioned, I have used it for sawing wood, grinding feed, and hauling and moving houses. One fall I shelled nearly 40,000 bushels of corn for others. But in every case I have always taken good care of the machine.

I believe that whenever a man can possibly do so he should run his tractor himself rather than hire inexperienced help; not that it is a hard job to run a tractor—any man can do it, so long as it runs all right—but the minute something gets out of order an inexperienced man is sure to have trouble. I had a hired man running my tractor once. Within less than five days he had let the oilers run dry, and considerable damage was done to the machine. The result was that we were tied up for a week before we could get the necessary repairs. The cost of repairs was not so heavy, but it was the loss of time that counted.

I believe that a rather moderate-sized tractor of rather slow speed is the best machine for the average farmer. But even a small farm of 100 acres or so can be run to far better advantage by means of a tractor. It is much cheaper to work with a tractor than to keep horses, and if the machine is properly taken care of it will last many years.

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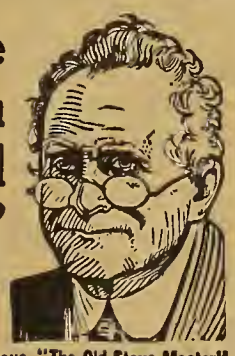
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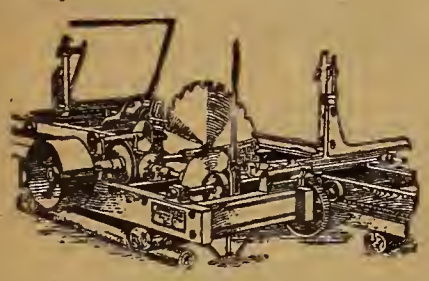
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Methods That May Save You Money

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My Method of Selecting Seed Corn

By M. Baird (Kansas)

THE most satisfactory method of selecting seed corn I have found is to choose the corn as it is being gathered in the field. I place the seed ears in a box on the side of the wagon, and thus keep them separate from the other corn. The main things I consider in choosing an ear for seed are: Soundness, length, diameter, depth of kernel, color, and conformity to type.

Ears should be uniformly large and well proportioned. The color should be uniform, and the indentation typical of the variety. The cob should be as small as possible and still permit the maximum growth of the kernel. Corn for seed should not be chosen from stalks advantageously located. I select about twice as many ears as are needed for planting. It requires about 15 ears to plant an acre.

That the filling-out of the tips and butts does not deserve as much attention as is commonly given from the standpoint of yield has been shown in many experiments. In one series of experiments, covering a period of five years—from 1905 to 1909, inclusive—well-filled tips yielded 51.65 bushels an acre; medium-filled butts, well rounded, yielded 50.66 bushels an acre; partially rounded, 50.96 bushels; not rounded, or otherwise poor, 51.04 bushels. There is a tendency, in selecting tips and butts, to reduce the size of the ear.

The corn for seed should be stored in such a manner that it permits of free circulation of air around the ears, so as to dry them quickly and prevent molding. If they are not well dried before being subjected to freezing temperatures, the germ will be injured. A vacant room in the house that allows free circulation of air is an ideal place to store seed corn, but an attic, if well ventilated, will serve the purpose just as well. Seed houses have regular drying rooms or sheds, but for the average farmer this is not practical.

Seed corn should be tested twice if possible, one test being made in the winter and the other in the spring just before planting. In the winter test I select one kernel from each ear, and germinate. In the spring I make a more accurate test, about six kernels being selected from different rows and different parts of each ear. If fewer than five of the six kernels germinate, I do not use the ear for seed.

Beating Jack Frost to It

By Nat S. Green (Ohio)

THE first frost of autumn used to end our garden, just as it does the average garden to-day; but we came to the conclusion that there was no necessity for it, and we might just as well have fresh vegetables right up until winter. So about the first of September we set about to make preparations to cheat Jack Frost out of his usual toll.

Such vegetables as parsnips, celery, cabbage, etc., do not need to be considered, as they either remain in the ground through the winter or are stored in cellar or pit. Others, like radishes, lettuce, and spinach, are of lesser importance and also of a semi-hardy nature, so they are not worth consideration.

This leaves four vegetables of prime importance—tomatoes, lima beans, string beans, and sweet corn—which, if we are to enjoy them in a fresh state during the fall and the early winter, must have some protection.

For protecting the tomatoes and bush beans from the earlier frosts we have found that thin canvas, such as is used on tobacco beds in the spring, is sufficient. It is merely spread over the rows of beans, but for the tomatoes we make long frames of lath and spread canvas over them, tacking it to hold it in place. It is impractical to cover the pole limas with the canvas, so we tried the smudge-fire plan with them, as we had about a quarter of an acre of limas, and all the vines were full of half-developed pods, which would yield a neat profit if we could save them. For three nights we kept smudge fires going, making a dense smoke which hung over and among the bean vines, and scarcely any were nipped.

To prolong the season for sweet corn we pull the stalks up and stack them in a sheltered place. Many of the ears fill out fairly well, and give us roasting ears for some time after the regular season for them is over.

While these methods are all right as long as the frosts are comparatively light, they cannot be used when freezing weather threatens, so we pulled up a quantity of the bush beans and spread them out in the cellar, placing moist dirt over the roots. In this way they keep fresh for some time and you can have a number of messes of string beans from them.

We pull up a few of the tomato vines and



Photo by Eugene J. Hall

Saving labor for Dad

place them in the cellar, but we pick most of the tomatoes, and sort them closely. All which show any signs of ripening are spread out on boards in a sheltered place and used as they ripen. The green ones are picked over, and all thoroughly sound ones wrapped in newspaper and placed in bushel boxes, which are set in the cellar, with boards between to allow a free circulation of air. In two weeks these are examined, and all tomatoes which have commenced to ripen are removed, the others being rewrapped. They are gone over in this way frequently, and by using care in handling and sorting we have good fresh tomatoes long past Thanksgiving—in fact, we manage to keep a very few until Christmas.

While protecting these vegetables as we do is some trouble and entails some expense, we are amply repaid. The only money outlay is for the canvas, and that will last us for a number of years. The time involved is not great, and when we consider the pleasure derived from having fresh vegetables for weeks after the usual time we consider that our time is well spent.

Vermin are Expensive

HERE'S a neat little cost-of-production fact from the Animal Husbandry Division: Lice add a cent a pound to the cost of producing pork; that is, it costs $4 more to produce a lousy 400-pound hog than to raise one of the same size free of these parasites. This is the way they found it out:

They took 24 lousy hogs and divided them into two lots as nearly equal as to quality of animals as possible. The two lots were fed and cared for identically the same, except that one was treated to prevent lice. At the end of the fattening period it was found that the pork put on by the lousy animals cost a cent more for every pound than that added by the pen free from the "cooties." And keeping hogs free from lice is not an expensive operation, although vigorous and persistent treatment is required to eradicate them. Dipping in cresol compound (U.S.P.), two or more times, at intervals of fifteen days, will free the animals of lice.

For dipping, mix this compound in the proportion of one gallon to 100 gallons of water.

Saving Labor and Fertility with a Litter Carrier

By H. W. Swope

A GOOD litter carrier used for conveying the manure from behind the stall to the spreader or manure pit is in my opinion an absolute necessity on every well-managed farm. With one of these carriers properly installed you are able to clean the barn thoroughly in about one half the time it ordinarily takes to do the job by any other method. The work of cleaning out the stables is not only made much easier, and done better too, perhaps, but the task is less disagreeable than forking and wheeling, especially during the winter months of the year. The manure can quickly be put, with little effort on our part, right where we want it. Hired help does not object to cleaning the stables often and thoroughly when the barn is equipped with a good carrier. The result is a clean barn that is presentable at all times.

I noticed in a government estimate some time ago that more than $100 is lost annually on the average farm by not properly caring for the manure. This estimate undoubtedly is very low, as the average farm is not equipped properly in the handling and storing of manure. A manure carrier and a pit as well are unquestionably good investments on a farm of average size.

It has been carefully estimated that a dozen cows will produce about $400 worth or better, of manure each year. Now, unless some provision is made to save the liquid manure the value of this output yearly will be only about one half of the original value. This alone ought to prove even to the most skeptical that a manure pit made of concrete is a good investment for us.

The litter carrier and manure pit go hand in hand. They are both useful. The former saves labor and time, while the latter saves all the fertilizing value to be found in the manure, which alone is an item of great importance.

How One Potato Grower Increased His Profits

By W. A. Freehoff

THE difference between just ordinary farming and intelligent, businesslike farming represents most of the comforts and luxuries of country life.

Ed Kringle, a Barron County, Wisconsin, farmer has made a very practical demonstration of this fact. Kringle is a potato grower. At first he grew just "spuds" which he sold on the market for what they would bring. He found that the growing of market potatoes was profitable, but not profitable enough for an ambitious farmer.

So he decided to "certify" his potatoes and go after the Southern seed-trade market. Certified potatoes mean that the experts from the state agricultural college inspect the field of growing potatoes for purity of strain, and if the variety is found pure they may be sold as certified seed potatoes.

Last year, when Cobblers and Triumphs sold in Barron County for $1.25 to $1.50 on the local market, the same strains when certified brought an average price of $ per bushel.

That is why Ed Kringle became interested in certified seed potatoes. But he went a step farther than the ordinary farmer. He made this proposition to his wife that he would give her all the money the potatoes brought over the ordinary market price.

The first year this extra bought a piano, the second year new furniture for the house, the third year an electric lighting plant and a milking machine, and this year a new automobile.

Kringle believes in perseverance, as shown by his experience in showing potatoes. The first year that he showed in competition against the best Wisconsin growers he did not get a ribbon, but he came right back, and at last year's show his potato show his entries won first place.

His neighbors appreciate the work he has been doing with better "spuds," and he has no difficulty in disposing of a good share of his crop locally every year.

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How I Doubled My Egg Yield in Four Years

By G. J. Sauer (Wisconsin)

IF YOU were to come to my farm I could show you the methods I use much better than I can write about them. For doing the things by which I have built up a high-producing strain of chickens is much easier for me than to sit down and tell how I do them. When I first started trap-nesting I followed directions implicitly, and as I soon became discouraged at the great amount of work involved I abandoned the elaborate system of records that I had started. I then thought it necessary to carry on the work the year through. Now I do not start trap-nesting until November or December, and continue only until March. This is the critical period in egg production, and the hen that lays well during the winter months is almost sure to be a good producer the year round. That my methods are sound is shown by the fact that I have doubled my egg production in four years without increasing the size of my flock.

The first year I found that it took so much of my time keeping the records of the different hens I abandoned the plan, and did not use trap nests at all for several years. Four years ago I decided to try out a plan which I had been thinking of for some time. What I wanted most was to have my hens lay during the winter months when eggs bring the top prices.

Good, clean, well-balanced scratch feed, a little green cut bone, some green food, such as finely cut rutabagas, cabbage, or sprouted oats, with proper care and good housing, plenty of light and fresh air, are all absolutely necessary for maximum egg production. But even with all this, without a record of your flock, your hens may eat their heads off and still not be profitable.

The following is the plan which has proved successful for me. It has more than doubled my egg yield in four years: I installed the trap nests to take care of all my hens, using one nest to every two to four hens. More nests are needed than when using the ordinary kind.

I start trap-nesting in November or December, and continue into February. Each hen has a numbered leg band. I use a card-index system for all my records, and find it a saving of time, and also more accurate, to have these cards tacked up in each pen, crediting each hen with the eggs she lays. When the card is filled it is placed in the cabinet and another put up.

Above is shown a sample of card I use. In this pen there were 19 White Wyandottes. While this is not a big egg yield, remember this record was in January, when most hens don't think it proper to lay at all, especially in northern Wisconsin.

This gives a condensed record of 19 hens for nine days, January 1st to 9th inclusive. The top row of figures represents the number of each hen. The date in left-hand margin and the right-hand margin show number of eggs laid each day, while the figures at bottom of card show the number of eggs laid by each hen for the nine days.

Hens Nos. 12, 16, 26, 31, and 32 show about the same record for December, and very little gain for February. These five hens were culled out. Hen No. 28 laid only one egg during the nine days, but was broody during that time. She showed a good record for December, and also again after January 15th, and all through February.

There is only one way to get started right, and that is to buy the very best laying strain of whatever breed you take a fancy to; or, if you already have a flock of pure-bred chickens, cull out all undersized, off-colored hens, and those showing any other defects. Have your nests installed and be sure your hens are free from lice. Don't let your hens deceive you, your best laying hens may be your poorest lookers. Beware of the hen that is always out with a fine coat of feathers, because instead of putting her energy into a good egg yield it all goes into fine feathers. After you have finished trap-nesting and sorted out all your slackers, get them off the farm.

You should secure a good male bird, with his dam showing even a better egg record than your hens. You can't afford to go to your neighbors and trade roosters, but must get your male bird from someone you know has been trap-nesting, or you will tear your flock to pieces as fast as you build it up. If you can line-breed it is the only sure system. If several of your neighbors with the same birds will follow this system for a year or two, you will be able to secure male birds right at home.

Don't breed your pullets the first year if you can possibly avoid it; but, if you must, mate pullets to a two- or three-year-old male bird. Mate mature hens to cockerels.

My trap nests are all home-made, and cost around 25 cents each, not counting labor. Be sure you don't make them too small. Wyandottes and Plymouth Rocks need a nest 13 by 13 inches by 19 inches high. Farmers' Bulletin 682 gives a plan and description of a trap nest which can be easily made.

Don't try to build up a run-down strain of chickens. Start right, then stay right, and the results of your small investment in a few good hens will surprise you.

RECORD No. 11 — 1919 — 19 HENS — CARD No. 8

EGG RECORD NO. 2—WHITE WYANDOTTES

Jan.	12	16	17	18	22	24	25	26	28	30	31	32	33	34	35	36	37	38	39	Day Total
1	0	0	1	0	1	1	1	0	0	1	0	1	1	1	0	0	1	1	1	11
2	1	0	1	1	1	0	1	0	1	1	0	0	1	1	1	0	1	1	1	13
3	0	0	1	1	1	0	1	1	0	1	0	0	1	1	1	1	1	0	1	12
4	0	0	1	0	1	1	1	0	0	0	0	0	1	1	1	1	1	0	1	10
5	0	1	0	1	1	1	0	0	0	1	0	0	1	1	1	1	1	1	1	12
6	1	0	1	0	1	1	1	1	0	1	0	0	1	0	1	1	1	1	1	13
7	0	0	1	1	1	1	1	0	0	0	0	1	1	1	1	1	0	1	1	12
8	0	0	1	1	1	0	1	0	0	1	0	0	0	1	1	1	1	0	1	10
9	1	1	1	0	1	1	0	1	0	1	0	1	1	1	1	1	1	1	0	14
Hen Total	3	2	8	5	9	6	7	3	1	7	0	3	8	8	8	7	8	6	8	107

Raising Better Turkeys

IF YOU want to make more money with turkeys the method of Ida E. Bloye, Franklinville, New York, may help you.

"A pure-bred tom to head one's flock," writes Miss Bloye, "will pay the best returns for the money and time invested of anything in the poultry line on the farm. If the hen turkeys are all or part pure-bred, so much the better; but if they are only mongrels, a pure-bred tom will improve the flock wonderfully.

"For about twenty-two years Mother and some of we girls have raised turkeys, owning the flock together. A few years ago a pure-bred tom was bought to head the flock, and when fall came, and the young turkeys came in off the range, everyone that saw them remarked what a fine-looking lot of turkeys they were. And they certainly were fine-looking birds; they were larger, weighed more, had a better shape, had better markings and color to their plumage, and when they were little poults they seemed to be stronger and grew faster than our turkeys ever had before.

"All of these good qualities helped considerably in selling them on the market or as breeders that fall. Although the young ones were only about three-fourths pure-bred, those that were sold for breeders brought $5.50 apiece, and the buyers were so well pleased that they either came back the next year for more or told their friends and neighbors where they could get some good turkeys. For the following two or three years the profits from the flock increased each year, although the same number of hens were kept."



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Give the Young Pigs a Good Start in the World

By R. B. Rushing (Illinois)

SEVERAL years of hog-raising and some costly mistakes have taught me several things about caring for the pregnant sow and newborn pigs that I believe are worth passing on. Watchful care during this trying period will not only save many pigs but will also give the little porkers a start that will hurry up the day when they go over the scales.

Guard against having too many sows heavily pregnant in one bunch, as crowding or jamming will cause abortion or dead pigs. Crossing high barn sills, or other similar obstacles, is dangerous, and should be avoided. Sows will usually farrow about the 112th to the 114th day, but more will farrow at the earlier day, and I have never had one to farrow sooner than the 110th day.

In the evening of about the 107th day I generally drive the sow to her farrowing pen. One man can easily drive her if he knows how. He should have a basket, and whenever the sow turns to go back hold it before her. As soon as she finds her head in the basket she stops and does not become excited, which must by all means be avoided. I mention this because it is of the utmost importance that the sow be handled gently and easily. Speak to her, scratch her, and teach her to have confidence in you. If the day is pleasant let her run with the rest, as she must have exercise to be healthy.

If you will observe closely you will notice uneasiness from six to ten hours before farrowing. If an old sow, she will invariably make a nest; with young mothers the uneasiness may be the only indication. Be on hand when the little fellows begin to arrive. And if the weather is cool pick them up as fast as they come, and put them in a barrel or a high box. Have some warm bricks or pieces of iron in the bottom covered with straw and an old quilt or gunny sack, with another to cover the top. This makes a nice warm nest, where they soon get dry and comfortable. After they have all arrived and have warmed up and are lively, let them out to have their first food, being sure that none get left. When they have enough put them back in the box, and after two or three hours put them back to suck again, and leave them with the sow if she is resting quietly and seems to be doing well.

Many pigs that might die otherwise can be saved in this manner. If your farrowing pen is a little higher on one side than the other, the sow will make her nest on the lower side and will usually lie with her back up the hill, thus lessening the danger of smothering the pigs.

The next step will be to keep the little fellows in a thirfty, growing condition. Always keep the nest fresh and clean, and after a couple of days give plenty of bedding. I prefer wheat or barley straw, but do not like oat straw. Millet hay is very good. Give the sow all the water she wants the first day, slightly warmed, if it is very cold, and no feed, except perhaps slop, and do not disturb her. On the second day I begin giving light swill, and from now on increase the feed daily until at the end of ten or twelve days she is on her regular feed. If she has a good-sized litter it will be safe to feed her quite liberally. If she is a poor mother, give plenty of milk-producing feeds, such as soaked shorts and a little bran mixed with ground oats, or wheat and barley. If she gives a large flow of milk, a part of the ration should become bulk, as above.

Feeding sows too heavily the first few weeks causes a heavier flow of milk than the little fellows require, and in consequence the udder is not emptied. The milk remaining soon becomes feverish and begins to cake, and upsets the delicate stomach, causing scours. Scours are hard to prevent sometimes, and still harder to cure. It has been my experience that one person should feed the same bunch of hogs all the time, carefully watching the amount of feed given. No two persons can feed exactly alike; and, not feeding enough at one time and too much at another, the pigs gorge themselves and the result is scours. As far as it is practical feed at the same hour daily.

Pigs, like farmers, like to have their meals served on time. After about three weeks have a small pen where the sow cannot go, but where the pigs can go at will. A little warm milk, some soaked corn and oats, will draw their attention. After getting them well started, feed skim milk and soaked corn and wheat mixed, and such food as they will eat up clean.

After the Moult—EGGS



REMEMBER, going through the moult is like going through a long spell of sickness. To force out the old quills and grow new feathers saps a hen's vitality.

If you expect your hens to be fall producers and winter layers, then feed them Poultry Pan-a-ce-a during and after the moult.

Dr. Hess Poultry Pan-a-ce-a

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It brings back the singing—it brings back the scratching—it brings back the cackle. That's when you get eggs; and it's eggs you want—fall eggs, winter eggs—when eggs are eggs.

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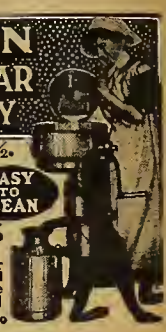
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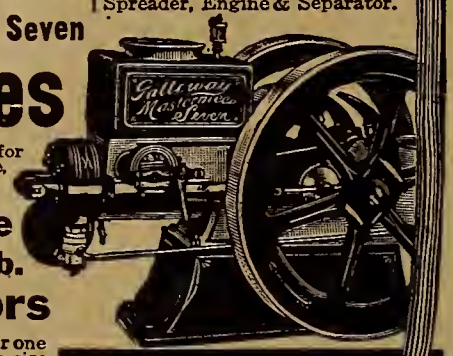


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Learning from My Neighbors

Morgan White (Illinois)

A LARGE part of what I know about farming has been learned from my neighbors. From some I have learned things I ought to do; from others, things I ought not to do.

Andrew Baker, whose farm corners with mine, is one of the men from whom I have learned much. Andrew is a specialist in raising hogs. He has studied pork and porkers since he was a boy, with a diligence and reverence for his subject that would do credit to a college professor. He has fed hogs of all ages and sizes, and in all the ways imaginable. He can tell you all the details of feeds, and how to make the most out of them.

One day last week I went over to spend an afternoon with Andrew. I had not seen him for nearly two months, and was sure he had much to tell me. He likes to talk on his favorite subject—pigs. As I had hoped, he was out with his pigs, going from one lot to another, studying the results of some experiments he was carrying on. So deep was his study that he did not notice me drive up. I hitched my horse, and was about to slip up and give him a friendly slap on the shoulder, when he turned suddenly and saw me. His face lit up with a smile as he gave me a hearty greeting.

"Hello, expert!" I said as I walked up to shake hands. "What are you up to now?"

"In the first place I am no expert," said he; "and as for what I am doing, I am trying to figure out why I don't know more about my business—why I sometimes succeed and sometimes fail."

I soon found myself listening intently to his account of what he had been doing.

"There," he said, "is a pen of five hogs which I have fed as farmers often do, in a pen where it is muddy, as you can see. If you want a hog to eat his head off, that's the way to do it. I weighed those pigs yesterday, and they have made an average gain of about .3 of a pound a day for the last two months. They have had all the corn they could eat, but nothing else, and they have gained only seven pounds for each bushel of corn they have eaten. You see their condition. It is really cruelty to animals, but I wanted to satisfy myself on this one point."

We walked over to another pen where there were five other pigs fed cornmeal and tankage. He said they had made very satisfactory gains, but at too high a cost. Even with present high prices for hogs it did not pay him to feed that way. "But come out here in this clover field," said he. "I am not ashamed to show you what I am doing there. Those pigs are harvesting hay and converting it into pork."

It was a pretty sight to see the thrifty, growing hogs wading through clover that almost covered them. From all sides came that grunt which, in pig language, means satisfaction, contentment, and good health. It was really good to see their clean, glossy coats. There was certainly no tuberculosis nor cholera amongst them.

"I weighed these pigs at weaning time," said Andrew; "then again in June. Their feed was corn, a little tankage, and this clover pasture. They had made an average gain of a pound a day, and had made 25 pounds of pork for every bushel of corn fed them. I weighed them again yesterday. Since June they have gained three quarters of a pound a day, and for every bushel of corn fed they have produced 17½ pounds of pork. You see," he continued, "as they become older they take on weight more slowly, and it takes more feed to make a pound of gain."

"What do you do," I asked, "when the price of corn goes up?"

"If there is too great a rise in price, and not a corresponding rise in the price of hogs, I simply cut down the feed of corn a little and make them consume more pasture. Of course, there is a limit beyond which this should not be carried. Just at present I could pay $2 a bushel for corn and still make money. It's all in the pasture. I can't afford to raise hogs without it. Next year I hope to have an alfalfa pasture; that is the best of all."

We crossed the clover field and walked through the woodlot. As we emerged on the other side we came upon a field of a beautiful green crop that was new to me.

"What is this?" I asked as we waded out into the luxuriant growth that came up under our arms.

"This," said he, "is my winter pasture."

"Winter pasture!" I exclaimed. "But won't the frost kill it? And besides, how can the hogs reach up to pasture this stuff!"

Andrew laughed at me for this, but immediately explained:

"You see, these pods are beginning to harden. In a few days these leaves will begin to turn yellow. Then we will cut and shock the crop, and put it in the sheds and barn. During the winter we feed it out in racks as hay to our hogs. It takes the place of pasture, you see; saves the expense of buying high-priced feeds, and makes every pound of corn do its best in producing pork. It furnishes the exact food elements that are needed with corn, and prevents entirely such results as you saw in that first pen. This soybean crop," he added, "is one of the most valuable I grow on my farm."

I could but marvel at the completeness of his plans—every season of the year provided for to produce pork most efficiently, and at the lowest possible cost.

It was getting late, so I bade Andrew good-by, and turned my horse down the road. On my way home I stopped a moment to see another neighbor who had moved into the neighborhood only the year before. I had hoped to learn something from him too, but in this I was disappointed. In a bare lot by the roadside on his farm were about 50 shotes that would weigh 100 to 125 pounds each. They were not fat, and from their appearance I judged they were not thrifty. I saw some wagons in the barn lot ready for loading.

My new neighbor told me he had sold his hogs, that they were not doing well, and that he could not afford to feed corn at the present high prices. He also said he was going out of the hog business. I took in the situation, and decided not to argue the matter for fear I might lose friendly relations with him. I invited him to come over some time and spend an afternoon with me, and incidentally told him what a delightful visit I had had that afternoon on Andrew Baker's farm. I suggested further that we all get together occasionally to discuss our farm problems.

I turned from this farm with a heavy heart. "There," said I to myself, "is a man not living up to his opportunities."

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Practical Marketing Methods

[CONTINUED FROM PAGE 26]

Chicago, November 12-13, 1919, and which promises to be the first really effective national organization we farmers have ever had.

Before the appearance of the bollworm in Pontococ County, Mississippi, the farmers of that fertile region often produced a bale of cotton per acre in their rich valleyland. In 1915 the county produced 9,500 bales of cotton, but the next year the boll weevil caught them, and their crop dropped down to 1,800 bales, which sold for 17¾ cents a pound, making a total of $159,750. In that year it is estimated that $150,000 of food and feed were brought into the county. As cotton was the only crop, that left a balance for the farmers of $9,750, after taking out the cost of the imported foodstuffs. The future looked pretty dark, but instead of giving up they began anew under the direction of their county agent. Now they will tell you that the cotton pest was a blessing in disguise.

Until 1916 there had never been a single car of hogs, corn, melons, cane seeds, peanuts, or popcorn shipped from the county. That "safe farming" has come to stay is shown by the fact that during 1918 and the first part of 1919 the farmers of Pontococ County shipped out 104 cars of hogs, valued at more than $250,000; 468 cars of corn, valued at $567,376; 20 cars of molasses, valued at a little more than $50,000; 50 cars of cane seed, valued at nearly $30,000; and 7 cars of popcorn, valued at more than $10,000; as well as 46 cars of peas, 7 cars of velvet beans, 4,700 bales of cotton (1918), 176 cars of cottonseed products, 21 cars of cattle, 23 cars of mixed cattle and hogs, 29 cases of eggs, 8 cars of poultry, several cars of lumber, and express shipments of eggs, poultry, butter, and cream. The grand total of the agricultural products for the county was more than $2,500,000, or $2,340,250 more than the year the bollworm hit them.

How One Big Dairyman Keeps His Sons on the Farm

By W. A. Freehoff (Wisconsin)

A CAREFUL scrutinizing of the live-stock advertising columns of leading farm journals reveals a surprising number of father-and-son partnerships—surprising because upon investigation a great many of the sons involved prove to be mere lads of five, six, and up to ten or fifteen years of age.

These fathers early realized that there was a drift from the farm to the city, and they did not care to have their sons join the great white-collar procession.

Fame and fortune might await them in the Big Town; but, on the other hand, shabby gentility and obscurity would more probably prove their lot. Safe at home on the farm, there are boundless possibilities for advancement.

One of the most conspicuous examples of a father-and-son partnership is that of Adam Seitz and Sons, Waukesha, Wisconsin, as their advertisements read. By many Mr. Seitz is acclaimed the greatest showman of America. Certainly, his record of pulling out the champion Ayrshire show herd of the county for seven consecutive years is no mean achievement.

There are six Seitz boys old enough to take an active part in this work, and the oldest of them, Louis, is only twenty-four. These boys, as mere lads, have themselves fitted the wonderful show herds which have swept aside all competition at expositions of such importance as the National Dairy Show.

When their cattle are fitted they take them on the circuit themselves, and personally led the prize winners into the ring. No hired "experts" are ever employed as the best expert has nothing on either Mr. Seitz or his young sons.

Mr. Seitz takes great delight in telling how he sent Louis, when only nineteen years old, to the East to pick up a carload of Ayrshires to supply the local demand. Louis left, and in just three days he found his car in the herds of two States, and brought the cattle home.

Louis had kept a record of his expenses, and after every animal bought he put the buying price and what he judged would prove to be its reselling price. When the whole earload had been sold Louis discovered that it had netted just $50 more than he had estimated.

Mr. Seitz is not worried that Louis will leave him to take a fling in the city, for Louis and his younger brothers have a cash interest in the business, which yields them bigger dividends than would a job in town.

Cowpea and Cane Silage

By R. B. Rushing (Illinois)

I HAD some experience with cowpeas and cane silage last winter that has been very profitable to me, and perhaps it might help you. I sowed about 3½ acres on July 24th, mixing the seed by pouring a half-bushel of cowpeas into an ordinary wheat drill, and then pouring a peck of sorghum cane seed on top of the peas. Then I mixed the two thoroughly with my hands. I set the drill to sow a bushel and one peck to the acre.

When it first came up, there was nothing in sight but cowpeas; but it was not long before the cane began to show, and as the cane grew tall the peas climbed the stalks. When it was ready to cut, there was an enormous mass of feed such as one rarely sees. I mowed it as soon as the cane was well headed out, and there was so much of it that the mower would barely run over the down swath. I raked it into windrows as soon as possible, and let it lie for two days, until nearly cured, and then ran it through a silage cutter into the silo.

It made as fine silage as I have ever seen, and the cows seemed to like it better than anything else we could give them.

The milk production of my cows during the winter was splendid, and I expect to sow at least 10 acres after the oats crop is out of the way. The yield of silage I found to be even greater than corn on our thin hill soils, and the quality fully as good as any corn. The idle fields that produce nothing but a crop of weeds later in the summer can thus be utilized to supply early silage.

Best Time to Wean Pigs

WEANING pigs too early will cause you loss instead of gain, according to the Department of Agriculture. When the pigs are from six to seven weeks old the sow should be on full feed, and should be capable of maintaining the young in excellent condition, and with less trouble and expense than they could be raised otherwise. Unless there is some special reason, they should be left with their mother until they are ten weeks old, and it is preferable to wait until they are in their twelfth or fourteenth week. Then, if they have had access to corn, tankage, or other concentrates in the self-feeder, without interference by other hogs, the weaning becomes a natural process, without the radical changes in diet which sometimes cause serious trouble. They will simply continue their "cafeteria" diet in a contented manner.

I have observed that to obtain maximum gains pigs must be "on their feed" at all times, as a continuous and uniform growth is then assured. There should be an abundance of feed together with ready access, during the growing season, to such forage crops as alfalfa and red clover. It is good for them to harvest their own feed, because they then get it in its freshest condition and the exercise makes the young shotes healthy.

If there is any indication of your pigs being "off feed" their ration should at once be changed, using barley in place of corn and providing as much skim milk or buttermilk as possible. Freedom from lice can only be insured by the liberal use of crude oil on the animal, as well as in their quarters. Where natural shade is not available, temporary shelters should be built which will protect the young porkers from the burning sun. There is no rosy pathway for you to success as a hog feeder, unless it be your careful attention to the little details wnich make for the hogs' health and comfort.

D. O. A.

Will Quarantine Prevent Hog Cholera?

WHEN a disease particularly dangerous to human life breaks out in a community, a quarantine is enforced during the time of its height. Why isn't the same idea right for hogs when the cholera is among them? It looks to me as though it is, and there is some evidence among neighboring farmers that it is one way of keeping down the dreaded disease.

The cost of vaccination is not great, but it runs up in a herd of 50 hogs. The cost of a building is rather big, but it lasts. Hogs have to be treated often as your pigs grow up and are marketed and others take their places. I am not personally able to say just which is the cheaper. I have observed these things, but have only been a producer of hogs for something like a year. I am in it to stay, however.

One neighbor who had lost hogs in a cholera siege before has now a pretty good hoghouse made of cement. It is made for keeps, and is tight. It is large enough to keep hogs in day and night, and that is just what he does when cholera is around. Germs of cholera are carried by birds—sparrows principally, I am sure—and also on people's footwear. A neighbor will unknowingly carry them with him, and may do it carelessly. The result is the same. Dogs are another source of this traffic, and more dog laws or more enforcement is needed.

Now, I wonder if in two years or something like that the expense of treating hogs would not be better invested in a place for the hogs to be kept when danger comes in the neighborhood? The man who owns them would have much better gains, undoubtedly, and a good deal more comfortable time caring for them than without buildings that will house them. Our county agent tells me that the results from treating last year show it to be 94 per cent efficient. That is splendid, and most of us know the results in our own neighborhood. Would not quarantine be as efficient, counting a five-year cost?



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Can We Communicate With the Dead?



MARGARET DELAND, America's greatest woman novelist, has written a series of articles on spiritualism for the WOMAN'S HOME COMPANION. Is there a spirit "wireless" between our world and the next? Are the table-tipping and rappings of the "mediums" sufficient evidence? Do our loved ones write to us through the planchette and the ouija board? Is there something that cannot be explained except by actual communication from those whom we call dead? Or have such eminent, clear-headed men as Sir William Crookes, Sir Oliver Lodge, William James, Tennyson and Gladstone been deceived? These questions are discussed in a sane, thoughtful and intensely interesting way.

There Are TWO Perfect Husbands In Brooklyn

and only one other in the whole state of New York. Their wives say so! When the COMPANION asked its readers for letters on the subject of "My Husband's Worst Fault and What I Did to Help Him Correct It" the flood of replies was not anticipated. Untidy Husbands, Profane Husbads, Late-to-Meals Husbands, Grouchy Husbands, Husbands Who Are Finicky About Food, and many other varieties were described and their cures told in detail. Some of the letters were funny, all were clever. Read them!

She Lived Next Door to the "Uncle of Europe"

SHE talked intimately with the queen of Denmark. She saw royal princesses stand for hours at a court ball while she sat with the queen. A prince violated the royal custom to wink at her. Mrs. Maurice Francis Egan, wife of the American minister to Denmark saw the amusing human side of life in this most formal court in Europe. She tells her personal experiences with quiet humor and great interest, and you will enjoy immensely what she tells you.

WOMAN'S HOME COMPANION

The Crowell Publishing Company

The American Magazine, Farm and Fireside, Collier's Weekly

Mr. Porker is a Fine Corn Husker

By T. J. Delohery

THREE years ago W. H. Cook of Benton County, Indiana, found he could not get help to husk his 250 acres of corn. The men he could get were not experienced and, besides, wanted too much money.

Husking 250 acres of corn is no small job when the corn runs around 50 bushels to the acre. Cook admits he was puzzled, but remembered that some of his neighbors harvested their corn via the hog route.

So he went to the nearest man and learned the method.

"I haven't husked an ear of corn since I learned of the hog plan," he said. "Last year I husked 250 acres with sheep and hogs and propose to do the same thing this year. I think it is the best way, especially when huskers want 7 or 8 cents a bushel. That is entirely too much money when you also have to provide board and room.

"My plan is simple. I buy several loads of hogs, and then split up the cornfield into small plots, say of 20 to 30 acres, depending upon the number of hogs I have. I put sheep in first to dress up the plot. They clean up the weeds, grass, and leaves they can reach. Then I let in the hogs, and they break down the corn, which they and the sheep eat.

"When one plot is thoroughly cleaned up I move the fence, and give them access to another plot of the same size. It doesn't take long, and the corn is cleaned up better than I could do it with high-priced huskers. Moreover, lots of the stalks, leaves, and grass make mutton and pork, which otherwise would go to waste. Two weeks before the corn is ready for the hogs I start feeding them new corn, gradually increasing the amount until they are almost on full feed. Then they are ready for the field.

"I think this is a better policy than to take the hogs off shelled corn and turn them into the field. Too sudden a change is likely to have bad effect on the hogs, the same as a quick change from any other feed. Tankage is always available, as I keep a feeder in the field with the corn. This permits the hogs to balance their own ration, with very little labor on my part. The only thing I do is to move the fence when it is needed, and to keep the feeder filled with tankage.



Hogging off corn grows more popular every year

"I believe the idea of sheep and hogs is much better than hogs alone, because the sheep eat a lot of green stuff that the hogs pass up. Sheep leave nothing that is edible. Not only does this plan save labor in husking, but it also saves labor and horses in spreading and handling the manure.

"My crop yields are better, because none of the solid or liquid manure is lost, and it is spread evenly over the field.

"The hogs which I use to gather my corn are of the feeding order—that is, thin and growthy. After the hogs and sheep have been over a plot, I turn in the fat hogs and sows. They pick up a kernel here and there, and the exercise keeps the sows in good trim."

I have talked with scores of farmers who hog down their corn. The practice is becoming more wide-spread every year. It is simple and economical, and saves lots of time and labor. The expense is small, as most every farm is fenced hog-tight.

Fresh Rhubarb Through the Winter

WE ALL love a good, tasty dish of rhubarb or a pie that melts in your mouth, and Cora J. Sheppard of Shiloh, New Jersey, tells how she keeps a fresh supply the winter through without a greenhouse. Her method of raising it, and her success in making it a profitable side line, is described as follows:

Who is not glad to tone up his system with the first green rhubarb that pushes through the ground in the spring? It is to the physical man as religion is to the spiritual part—it helps clean him up.

As a girl at home on the farm I remember we had three hills of rhubarb. The rhubarb we had then didn't get much care, but it furnished the family with all the sauce and pies needed. Now that I am in a home of my own, rhubarb tells a different story. We know that it needs a rich soil and that it is a great feeder.

We started with one 135-foot row across our garden. The plants were given to us by a farmer, who raised acres and acres of it. He had been setting a new field and had a lot of roots left over. When we tried to buy them he let us have all we wanted without cost.

For fifteen years those roots have been a source of enjoyment and profit. Each fall when cold weather comes a few roots are dug out of the ground in square chunks and left in the open until the ground freezes, when they are taken to the heater cellar and placed in a box. These roots are watered occasionally, and in a short time they are sending up the most beautiful pink stalks, furnishing our table with delicious freshness even in the coldest weather.

Our plants grow so rapidly that the stalks are very tender. The darkness of the cellar prevents very much leaf growth. This is as we want it, for the stalks are the only part to eat. The roots we use for forcing are quite exhausted, so we do not force them again soon, but put them out in the ground again and allow them a year for regaining strength.

The roots out of doors need a good covering of horse manure to keep them warm and to give strength, for rhubarb is a rank feeder. In the spring the manure is raked off, and our rhubarb is usually the first on the market.

Two more 135-foot rows have been planted from divisions of the first row, making 150 hills, and we sell a little more each season. Last season's crop netted $47.97 for 896 bunches, or 31½ cents a hill. The very earliest of course brings more per bunch than do the others.

Rhubarb-pulling is always fun for me, and there is a special fascination in giving the proper yank to a stalk to make it come out whole and perfect without harming the plant. The most exciting time is when it tries to go to seed. We have no use for the seed, and it takes the strength away from the plant, so I appoint myself a committee of one to see that all the seed stalks are destroyed. We have given away roots at times, as well as bunches of rhubarb, and feel that we are only passing along the blessing given to us so long ago by a good Bay Side farmer.



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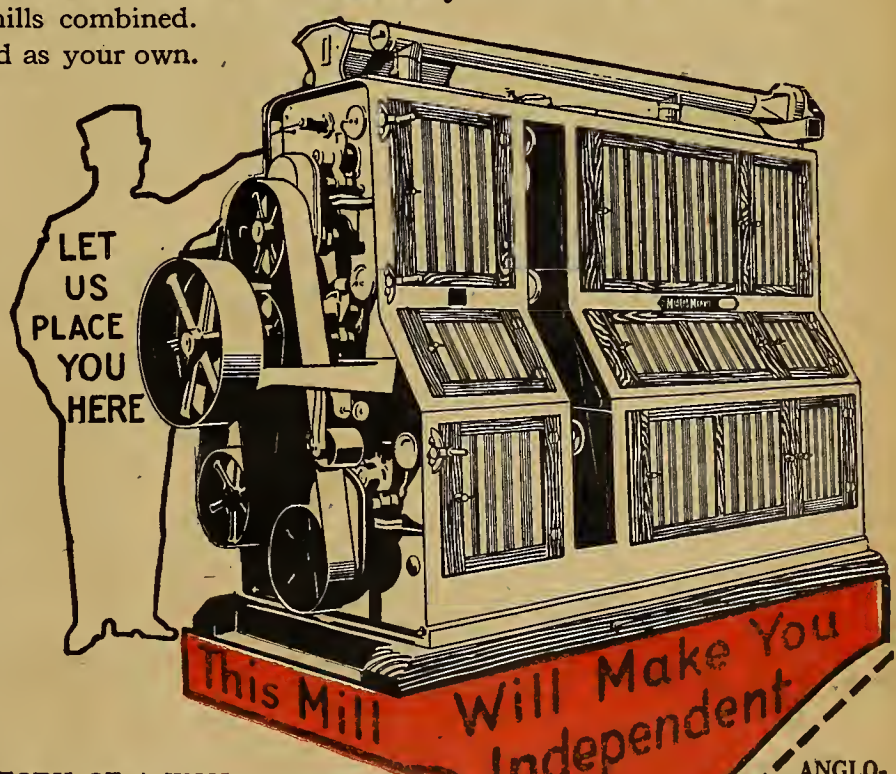
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Some Milking-Machine Don'ts

A CANVASS of dairy cattle breeders handling valuable pedigreed cattle, and naturally extremely critical of all aspects of milking-machine use, produced helpful cautions. Many breeders as well as market milk farmers now use machine milkers exclusively, and they can intelligently discuss the ways in which inexperienced owners of machines sometimes make mistakes. The dealer or agent selling the machine in over-enthusiasm sometimes paints the milking process as so simple by machine an untutored child can do it, which isn't so. Machine milking isn't a fool-proof operation—yet.

"A man must make sure that all the milk is taken away," said one breeder. "You must be on hand at the proper time to finish up each cow. With some cows it is necessary to strip, but many of them, particularly the younger ones, will milk out clean if a little weight is added to the teat cups, and the udders manipulated a little. However, if the attendant is not on hand at the proper moment, and the machine is left running, the cow will hold the strippings, and much time is lost in hand stripping before it can be got, if at all."

"One thing a man must do," cautions another dairyman, "and that is make up his mind to keep things clean. A milker if properly cared for will produce clean milk, but if carelessly handled it can become the very worst source of contamination imaginable."

"The mature cows give about half a pound of strippings, and the heifers scarcely any," stated a Holstein breeder. "I believe the machine would take practically all the milk if left on long enough, but it would not pay. I find it best to have the udder worked till the cow is ready to let down freely before putting the machine on, and also to take the machine off as soon as it begins to milk slower than I could by hand. Thus the machine is kept working at its maximum all the time. Instead of sitting around and waiting for it to finish up a cow, I put it on another one and finish by hand."

The successful herdsman on a well-known breeding farm believes "that many farmers imagine that there are no strippings, when the real fact is that they have left the machine pulling away after the milk ceased coming, thus causing discomfort to the cow and leading her to refuse to let down even to hand stripping." On the subject of hand stripping, another breeder who followed it declared that nothing had prejudiced farmers more against the machine milker than agents who claimed the machine did not require to be followed by hand milking. J. T. B.

The Farm Spud Will Save Your Back

By Earl Rogers (Ohio)

"SPUD" is the name I use for a long-handled tool with a blade on one end. It is one of the handiest things around my farm, and is used especially for cutting dandelions, plantain, and other weeds out of the lawn or any of the fields.

Our spud is made from an old, narrow, garden hoe. The blade is stuck straight in the end of a six-foot handle, and fastened with a screw or bolt. The blade is two inches wide, but for some work a narrower one is handier.

It should be made of good steel, so that it will hold an edge for some time. I saw one farmer weeding his cornfield the last time with such a tool. He was taking two or three rows at a time, and getting the occasional large weeds without much running from one row to another, and he was cutting the weeds with less effort than with a hoe. We have never used it for that purpose, but I intend to try it. The reason we made our first one was that there were several acres of newly planted strawberries, and the first year we cut off the blossoms to stimulate growth in the plant. I had this job, and once used a pair of house shears. The spud is much quicker, and, oh, how much easier on one's back.

Gasoline—How to Save It

By B. H. Wike (Illinois)

THERE are few persons who really think of the many little tricks of saving gasoline. A drop of gasoline here and there soon makes a gallon.

Take the carburetor. It is through this device that the gasoline passes while the car is in operation. Too rich a mixture will cause more gasoline to be used than necessary, and it means that it is in excess for the amount of air supplied. It may take less air in the cold season; but even then, if the motor gets warm and the cold air from the front is reduced, the choker at the curburetor can be opened for more air. The average ratio of gasoline and air for a burning mixture in the cylinders is about sixteen to one. At all times endeavor to make the motor use as much air as possible without spitting at the carburetor. After the motor becomes warm turn down the needle spray until it runs smoothly. Various carburetors have different means for setting, and it is best to follow instructions for your particular make, or else get someone who understands to do it. What applies to one will not always apply to another.

Constant engine speed on high gear, say at about 15 or 20 miles an hour, does not use as much gasoline as the spasmodic gait where one spurts ahead and then as suddenly slows down, repeating the performance. Keep your engine speed regular, and do not race it. This practice of racing uses an inordinate amount of gasoline, and is otherwise injurious.

If the couplings of the gas line, from tank to carburetor, feel moist and drops of gasoline are found to be coming out, no matter how slowly, attend to these couplings at once. They may need either a little more tightening or else need to be taken off and repacked. It is easy to twist one of these out of shape and working order, so be very careful.

Keep your cans of gasoline in a cool place. The caps on these cans are not always air-tight, and the heat striking on the outside evaporates the gasoline within, with the result that the vapor slowly escapes past these covers.

When the engine is cold, gentle flooding of the carburetor will often hasten a start, provided other conditions are equal and favorable. But do not overdo the flooding act, for if the chamber of the carburetor overflows excessively the loss of gasoline may be considerable.

If the carburetor continually leaks, perhaps the float is heavy and does not rise soon enough to shut off the gasoline. It may be also that the check or shutting-off valve which the float operates does not seat well, in which case a little grinding with an emery paste will, if well done, make it seat properly and be gas-tight.

Grit Wears Engines Fast

By Earl Rogers (Ohio)

LIKE most farmers, I take care of my own car, and I try to do it the quickest and best way that I can. I do not have time to fleck the last speck of dust off the fenders very often, but I do try to keep the wearing parts in tiptop shape all the time.

Lubrication is one of the things that I never neglect, and I get the best oil I can buy, after four years of driving an inexpensive make of car that we give a good many hard knocks. The expense per mile for oil is very light, and a difference of 25 cents a gallon will never be felt and certainly gives a smoother running motor. I have been through the cheap cylinder-oil experimental stage, and have found that it does not pay to use anything but the best.

Just as important as the grade of oil is the care of the container used to put the oil in the car. I learned this lesson when I ran a twin motorbike with the oil-can top open one summer. Enough sand got into the engine that way to necessitate taking the engine down and regrinding the cylinder. I could feel the grit in the oil that came out of the machine. The cost was only $12, but enough to teach me better.

Now I keep the oil tightly covered, and I also keep the measure that I pour from covered all the time. At first I used a paper sack for this, but now I have found something better in a round pasteboard box, cut down to fit the height of the can. Dust and dirt easily get into these measures, and then into your engine. Protect your oil, and in so doing protect your engine. It pays to keep oil clean.

The artist Whistler told an inquirer that he mixed his paint with brains. And the successful farmer mixes his fertilizer with brains.



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Does Raising Poultry Pay?

[CONTINUED FROM PAGE 10]

or other motion the birds make, means; this, together with a knowledge how best to answer all these sign calls, is necessary to success. All these bird signs of sound or motion plainly indicate their conditions as to temperature, feed, grit, as to whatever is necessary to their comfort, growth, and fruitage.

"With an average of 1,000 S. C. W. Leghorn hens and pullets in a house 20x120 feet, divided into 12x20-foot rooms, with a 6x12-foot outside run in front of each room, I have had fairly good success, the yearly yield being about 14,000 eggs per 100 birds. Were I again building on the above scale I would make the rooms 10x24 feet for each 100 birds.

"Among the many things in connection with the business there is one I wish to mention, and that is, of all the nasty, unsanitary and everyday disagreeable labor makers, the dropping board is the worst.

"A very satisfactory substitute for the dropping board is a removable two-inch-mesh wire screen placed about 12 inches above the floor level, over a pit dug 12 inches below the floor level, under the entire roosting space at the rear of the room. This arrangement is in no way offensive, and may be emptied more or less often than once a year, as convenient time may offer or fertilizer may be needed."

MILO E. VAIL of Milton, Kentucky, has this to say:

"It seems that Mr. Hunt has tried the poultry business on quite a large scale, and, not having made a wonderful success of it, has concluded that all the articles in farm papers are lies and the writers are liars of the first class. Well, here is our experience with incubator chickens:

"Three years ago we hatched 120 chicks, and raised 117 of them. Last year we raised a large percentage of all the chicks hatched.

"This year we had 105 hatched April 5th. Of these one was killed, as it was blind, three died, and one was tramped to death. That is all we have lost.

"So far as white diarrhœa is concerned, will say that we never did have a case of it in our incubator chicks. We set our own eggs, or ones selected from flocks having range. The chicks are fed on buttermilk once each day, and have scratch feed, grit, etc.

"While we suppose there are many good hovers on the market, we have never had but home-made ones. Of course, it is not to be expected that anyone could be as successful on a large scale, but we do believe that Mr. Hunt has surely neglected them in some way to lose so many.

"We have been subscribing for your paper for years. While some of the articles may be a bit too rosy, we find the most of them very helpful."

HAROLD W. GOULD of Gould's Egg Farm at Lake Grove, New York, looks at it this way:

"I have read with interest Mr. Hunt's article setting forth his ideas of the almost insurmountable obstacles one is very apt to meet in the business of producing market eggs.

"Now, I am engaged in exactly that line of work. I look at the matter in an entirely different light. I have a good bit of pride in my work, and in the poultry business generally, and do not like to allow his gloomy outlook to pass unanswered.

"It is not my idea to discredit Mr. Hunt's good intentions, as I believe they were of the best.

"During the last four years I have built up from $500, and not overly good health, an egg farm which, in stock and equipment, is worth several thousand dollars. I have gained invaluable experience, good health, credit with business houses and my bank, a business which is giving me a nice living, and one which has grown in size and profits each year, and last, but not least, have been married and established a home. What more can I ask for?

"It is true that poultry business has its disadvantages, but is that not true of every business? It is not at all impossible, as Mr. Hunt leads us to believe, to eliminate white diarrhœa. On a well-arranged plant the incubating of the eggs is no great hardship. I have not found it necessary to market my fine, large, clean, fresh white eggs in competition with common barnyard eggs.

"Success in the market egg business requires the same basic principles that success in any line requires—a knowledge of the business and a fitness for it, system, and proper and timely execution of the details that go to make up the day's work.

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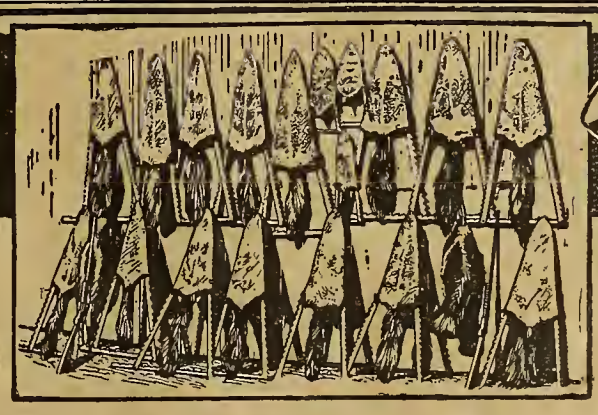
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Trapping the Stupid Opossum

OWING to the tremendous demand for all furs the pelt of the opossum takes on an increased style value, and market quotations show that opossum pelts are bringing considerably more to-day than in the past.

Here is opportunity for the ambitious boy who wants to make pocket money; for the opossum, being one of the most stupid of all the smaller animals, is easy to trap.

Be careful, though, not to trap them to such an extent as to exterminate them in your section. Common sense will tell you that there is money to be made in protecting these animals and letting them multiply by putting off trapping until they are mature and full-furred and have borne their young.

That is, for every opossum you kill in your neighborhood let one live. If it is a female, she will sometimes bear as many as a dozen young in a season. They in turn will bear others, and in this way you can be assured of a steady supply.

Look for opossum tracks in any wooded territory in your neighborhood. The trail is a wandering one, and the toes are turned outward. The whole front-foot print should measure about an inch and a quarter across.

The opossum builds its home in the ground, in rocky dens, and in hollow trees. The places to set traps for them are along fences, in wood gullies, in holes beneath stumps, or under rocks. Most trappers maintain that a natural enclosure, with the bait in the enclosure and the trap at its entrance, is the best set for opossum.

For bait, small birds, two or three grubs, pieces of fowl or rabbit will do. The opossum doesn't care whether the food is tainted or not. In setting your traps it is always well to cover them carefully, but no special pains need be taken, as in the trapping of wiser and more cautious animals.

A small trap (a No. 1 has proved very successful) should be used, one that grips the animal low down, where the muscles are coarse and the bones tough; otherwise the animal's leg is broken, and the opossum frees itself. As a rule, opossum are neither great strugglers nor fighters, but unless the proper trap is used they will sometimes get away. J. K.

Skin Your Furs Right if You Want Full Value for Your Efforts

THE duty of the trapper is only begun when he has taken his catch from the traps. An important task remains before shipping the pelts to market, and that is to skin the animals properly.

All the animals trapped in North America are treated in one of two ways—their skins are either "cased" or taken off "open." If taken off open, some are preferable fur side out and some pelt side out.

Casing a pelt means that you peel it from the body of the animal intact. Here is the way most experienced trappers say to do it: With a sharp knife cut from the base of the tail down each hind leg to the foot. Also cut the skin loose about the eyes and nose. Then suspend the carcass by the hind legs and with a gentle, slow movement, so that you will not tear the pelt, begin pulling downward until you have peeled the whole pelt from the animal's body. If the tail is valuable it should be skinned also, and the bone removed.

If you have never had experience in casing your catches it would be wise to have some seasoned trapper show you how it is done before you attempt it yourself. It is a task that requires care and skill, but you are repaid by the better prices that well-skinned pelts will bring.

The "open" method is used generally on coon, beaver, badger, mountain lion, and bear. With a sharp knife slit the pelt down the belly from the jaw to the base of the tail. Also make incisions down the back of the hind and the inside of the fore legs.

Then peel the skin off gently, taking special care when you come to the head not to rip or tear it. Never cut the head off. After you have done this remove every ounce of surplus flesh on the pelt.

Next comes the stretching of the skins. Steel stretchers may be procured for this purpose. Do not attempt this alone and unaided or without instruction at first. A wise move is to write one of the big reputable fur houses, asking for explicit and detailed directions for stretching skins, and any other information about preparing them for market that you may need. You



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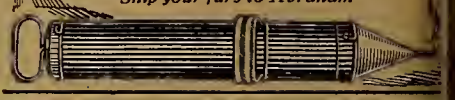
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will find that the fur house is willing to help you at every turn of the trapping game. Also observe and adopt the methods of trappers of experience.

The importance of this task cannot be overemphasized, because unless skins are stretched properly they will not bring full market value.

The drying process is not so difficult. Always remember that skins must be dried in a cool, shady place, and keep flies aw y from them. Never dry skins in the sun or by artificial heat. They must not be allowed to wrinkle or get brittle, and if for any reason they start to get too dry, moisten them from time to time with a wet cloth, taking care however, that this moisture doesn't remain when the furs are shipped. F. S. L.

Foods, Baits, and Scents

HALF the battle of trapping is knowing what the animals you're out after like best as food, and then displaying it temptingly in the traps.

But sometimes, when the game is wary, or not particularly hungry, even the choicest morsels of food will not tempt Mr. Raccoon, Mr. Mink, or other animals; then trappers resort to artificial baits or scent baits.

Fish oil is one of the most popular scent baits than can be used, and it is made with almost no trouble. Just catch a few minnows or small fish, slice them up, and put the pieces in an ordinary fruit jar. Set this jar in some sunny spot and leave it there a month or more, by which time it will be thoroughly rotten. Then pour out the liquid and skim from the top the oil that forms. This is the fish oil that all trappers use. A small drop or globule of it is enough to scent any set.

Of late years more and more trappers are finding the guaranteed animal baits prepared by some of the fur houses a great success. They are used extensively now in the Hudson Bay district—perhaps the greatest trapping area of the world. These scents are prepared with the idea of appealing to the strongest instinct of the fur-bearing animals—the sex instinct, which often is greater than the instinct for protection.

Animal baits of this sort are inexpensive, and have lured animals to the traps when all other baits failed. A. R. S.

One Way to Trap Fox

OLD trappers know that the fox will nearly always show marked interest in anything that looks like the remains of a camp fire. Usually, too, he will dig around in the ashes, doubtless entertaining the belief that something in the way of food has been left there by his enemy—man.

Therefore, when out trapping fox it is a good plan to make a bed of ashes. On this bed of ashes place scraps of meat, being careful not to touch the meat with the bare hands, for that would give it the human scent and scare away the quarry.

Bait the ash bed three or four times, allowing the foxes to visit it unharmed. Then set your trap, carefully covering it with the loose ashes. Next, burn a little grass over the place where the trap is set, to make the place look natural. Stake the trap securely, or else have a good clog on the end of your chain. Then put fresh bait near it, using leather gloves doing this, as well as in previous operations.

The fox, satisfied by reason of previous visits that the ash bed is a fine source of supply, and a safe one too, will be almost sure to spring the trap.

Another good place to make a fox set is on logs or saplings that bridge streams, one trap at each end. Then if the first one fails to catch him you still have a chance with the second.

In all operations for fox, be careful that you do not let the human scent get either on traps, food baits, or scents. R. C. M.

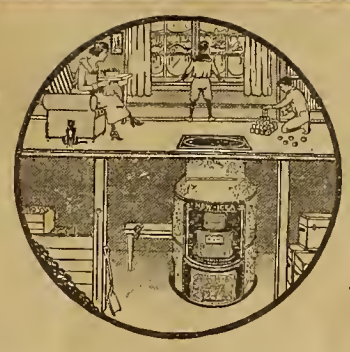
A Land Measure

I HAVE made a land measure with which I can quickly measure a field or strip of fence. It is made from three pieces of boards two inches wide and five and one-half feet long, fastened together in a triangle. I mark one corner with some bright-colored paint, then roll the measure along, counting each time the marked corner comes to the ground. Every count is one rod. To find the number of acres in a square field, multiply the width by the length and divide by 160.

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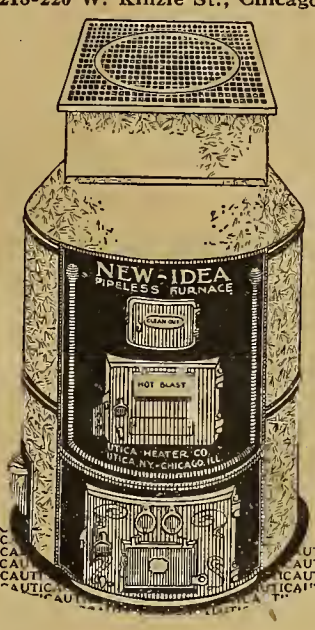
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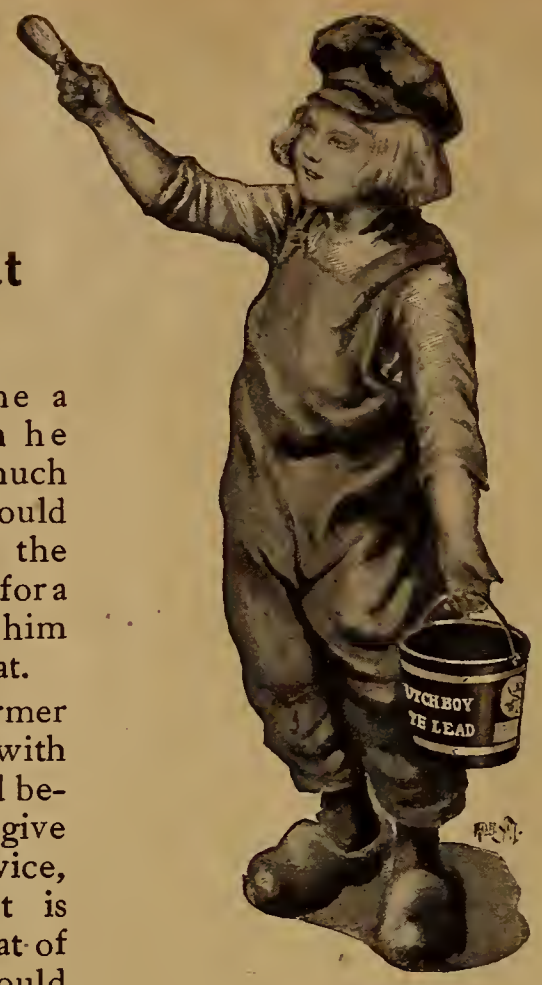
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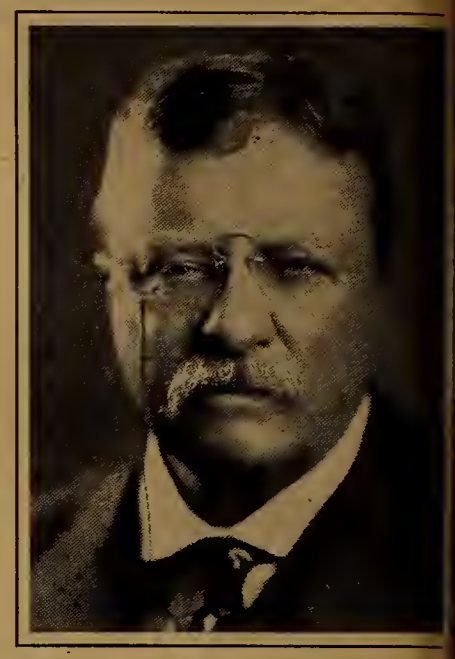
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Why Roosevelt Believed in the Farmer

By Edwin Carty Ranck



NO MAN in public life realized more keenly the debt that the country owed to the farmer than Theodore Roosevelt. In his book, "The Foes of Our Own Household," written shortly after America went into the war, Roosevelt speaks of the farmer as "the cornerstone of civilization," and in speeches that he made long before he was President of the United States he was constantly paying tribute to the farmer.

"We cannot permanently shape our course right on any international issue," he wrote in September, 1917, "unless we are sound on the domestic issues; and this farm movement is the fundamental social issue—the one issue which is even more basic than the relations of capitalist and working man. The farm industry cannot stop; the world is never more than a year from starvation; this great war has immensely increased the cost of living without commensurately improving the condition of the men who produce the things on which we live."

It was Roosevelt's firm conviction that the most important step in the ameliorating of farming conditions in this country was to make the tenant farmer a farm owner, thus restoring his self-respect and faith in his own ability. He felt that the freedom of the farms was just as important to the life of this nation as the "freedom of the seas."

Nor did Roosevelt ever talk vaguely and at random about farmers and their problems. He realized that the only thing that counted was results, and that the only way to obtain these results was by common sense methods. Therefore, whenever he discussed farming problems, he always tried to find concrete remedies, and offered them for the consideration of the farmer for what they might be worth.

One of these remedies was to eliminate conditions that produced the tramp type of laborer, and to place the farm laborer on a permanent status, offering him a career as a farmer and encouraging him to bend all his energies toward owning his own farm.

He also preached co-operation among small landowners, believing that a stand-together policy would aid each individual in obtaining his rights and getting the best possible returns for his labor.

Nothing riled the colonel more than the practice on the part of wealthy men of buying up large blocks of land, crowding out the farmer, and establishing great landed estates as domains of pure pleasure. This, he felt, was a serious menace to the existence of the producing farmer, and should be fought tooth and nail. He recommended progressive taxation as one method of fighting the evil.

Another excellent suggestion of Roosevelt was to make capital more easily available for farmers, thus putting them on a more equitable plane with other men engaged in business, and giving them an opportunity to put in improvements, buy tractors, and enlarge their productive activities.

Another point that the colonel was constantly emphasizing was the economic independence of the woman on the farm. He felt that she should have as much care as the man, and that conditions that tended to make her life a drab and colorless round of daily drudgery should be eliminated.

While Roosevelt was not, strictly speaking, a farmer, he nevertheless had as much right to call himself one as many landowners who use that title. He took a lively interest in all things pertaining to a farm, and farmers living in Oyster Bay vicinity will tell you that they alw found "the colonel," as they loved to him, reliably informed about crops live stock.

In an address delivered in Bangor, Ma in 1902, Roosevelt called attention to fact that almost all of our great Presid had been brought up in the country, had received their early training on fa

"The forces," he said, "which m these farm-bred boys leaders of men w they had come to their full manhood are at work in our country districts. Self- and individual initiative remain to a pec degree typical of life in the country."

Roosevelt realized clearly that the of the farmer who did all his own plow milking, haying, etc., and then trie look after the business end of his farm market his products successfully, was He knew that conditions had change radically the business of farming there was no longer any room for the style farmer unless he modernized methods. And he could only do tha directing the business end of his farm leaving the detail work to trusted ployees.

But Roosevelt also knew that there many able business men of the soil who been forced by circumstances to bec tenants under men less able than tl selves, but who had the necessary am of capital to do things that they were in a position to do. In these farmer ants he was greatly interested, and he that their salvation depended upon economical independence; otherwise lar conditions might develop in communities that had given birth to business octopus, the "trust."

Such a thing as a farmers' trust wa to be thought of, but such a thing farmers' union might be eminently pr cable, he thought, as a curb on the acti of rich dilettante farmers. While he l it was foolish to talk of such a thing arbitrary union among farmers of country, he also knew that there wa more effective weapon for them tha operation, provided it was co-operati the interest of the many as oppose selfish co-operation in the interest of the

The farmers of America had no doughty champion of their rights Theodore Roosevelt.

Farm Bureaus and Labor Prices

FARM bureaus are helping in several ways to ease the labor situation. In one New York county the county agent has vigorously promoted a movement for regular monthly payment of wages. In California the farm bureaus of Merced, Stanislaus, and San Joaquin counties co-operated this spring to establish uniformity in wages. Each bureau appointed a wage committee, and fair wages were set for general farm work, for orchard and vineyard work, for haying, and for irrigation work, all on the basis of a nine-hour day, with board furnished. For milkers a wage by the month was set. This movement is aimed to curb the wild compet for help at rush seasons, which has s times occurred, pushing wages to reasonable heights.

In still another way can farm bu help solve the labor problem, eithe themselves or in co-operation with a mercial club, chamber of commerc similar organization of town bus interests. Employing a paid secreta labor exchange is established, where seeking work and farmers needing register their wants. Such an exc energetically managed becomes an eff institution.

J. T.

ou Will Be Happier on the Farm

[CONTINUED FROM PAGE 15]

more work in six days than you can in
en. Bear in mind that you can do more
k in ten hours than you can in fourteen.
r in mind that to make the muscles work
ously at routine work they must not only
n condition so that it is a pleasure to use
m, but the brain must be pleasantly occu-
l too. That is what gives you farm lads
advantage, now that you have had this
cation. Your neighbor's son who has
learned to think or know sees only the
h that his plow is turning up. With
it turns up the history of the world
e the rocks cooled; it turns up the mys-
es of chemistry and the secrets of plant
It is no longer a dead thing. It feeds
r mind, and your soul as well as your
y.

here is one important advantage that
student in agriculture has over his
n associates: he will probably, some
, and that perhaps soon, be his own
ter. Most of the other lads will be
loyees. They are fitting themselves for
ul and paying work, but they will have
disadvantage of being cogs in a ma-
e for all that. You may not even make
uch money as some of them will, but
ill give you more pleasure. You will
e the suburban or country residence
the city man longs for, and gets as
n as he can afford it.

wish I could teach you the happiness
comes from renunciation—that comes
n doing without things. I once pitied
old hermits, the old monks and holy
, who renounced everything but coarse
hing and simple food and work. I still
k they carried things too far, that they
did things in their enthusiasm, yet
e is a satisfying happiness that comes
n self-denial, and you will do well to
riment a little in that line. The good
chman is the better for his observance
ent—it helps his body, his soul. The
ng man who does without the cigar, the
e luxury here and there, is stronger for
nd happier too. I would not ask him
e miserly. The helping hand that he
s, the dollar now and then invested in
ing one who needs it, is sure to be re-
in the joy it brings to his own soul.
he young man who walks sometimes
more out of life than the other young
who rides in a shiny buggy that has
n the larger part of what he should
e saved that year.

here is one more thing that will help
wonderfully, that is reverence. This is
age of irreverence. There is hardly any
r reason why we do not any more pro-
e such men as George Washington and
mas Jefferson. We have learned to
e at sacred things, to jest at holy
gs, and to criticize and sneer at our
lic men. I believe, myself, in hero-
ship. It will do everyone of you good
ake some great man—maybe he is one
ne knows but yourself—take this man
and think of his character, his life; it
strengthen you.

was down at Washington the other
. There is a monument there erected
he memory of George Washington. I
heard of it. It came as a surprise to
It towered above all that is in Wash-
on. Everywhere you went that tall,
ight, white, pure shaft looked down at
. The beauty and strength of it grew
you. After a time you took off your
and bowed your head to the memory
im whom it was meant to represent—
one incomparable American, the sim-
hearted, pure, strong character of
shington. You saw then that after all
t Americans worship is not wealth, is
social position, is not success as com-
ly meant by that term, but truth and
or, and usefulness and love, for all of
e things Washington had more than
fellows. And when you think of it you
glad that such a life was produced on
farm, that he went back to the farm
in and identified himself with country
after his work was done.

nd now I am done. It has been a
sure to write to you. I feel as though
n one of you were a personal friend to
and I wish you Godspeed in your life.
l you will, most of you, succeed. Re-
nber, though, that the greatest success
not in making money or making a stir
he world, but in building up your own
racter, and in that alone comes peace
happiness.

OTE: This is the fourth in the series of
Alfa Joe" Wing's last unpublished articles
ch are appearing exclusively in FARM AND
ESIDE. THE EDITOR.



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Send shoes *on approval*. My money back if I want it. I risk nothing.
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If you had been on the Arizona



HERE she comes, homeward bound, with "a bone in her teeth," and a record for looking into many strange ports in six short months.

If you had been one of her proud sailors you would have left New York City in *January*, been at Guantanamo, Cuba, in *February*, gone ashore at Port of Spain, Trinidad, in *March* and stopped at Brest, France, in *April* to bring the President home. In *May* the Arizona swung at her anchor in the harbor of Smyrna, Turkey. In *June* she rested under the shadow of Gibraltar and in *July* she was back in New York harbor.

Her crew boasts that no millionaire tourist ever globe-trotted like this. There was one period of four weeks in which the crew saw the coasts of North America, South America, Europe, Asia and Africa.

An enlistment in the navy

gives you a chance at the education of travel. Your mind is quickened by contact with new people, new places, new ways of doing things.

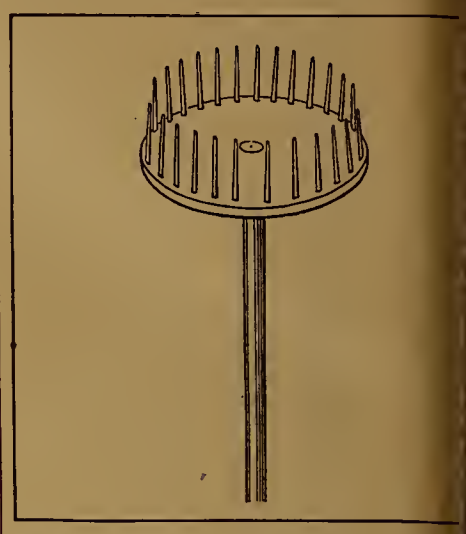
Pay begins the day you join. On board ship a man is always learning. There is work to be done and he is taught to do it well. Trade schools develop skill, industry and business ability. Work and play are planned by experts. Thirty days furlough each year with full pay. The food is fine. A full outfit of clothing is provided free. Promotion is unlimited for men of brains. You can enlist for two years and come out broader, stronger, abler. "The Navy made a man of me" is an expression often heard.

Apply at any recruiting station if you are over 17. There you will get full information. If you can't find the recruiting station, ask your Postmaster. He knows.

Shove off!
Join the U. S. Navy

Handy Fruit Gatherer

THE finest apples, the most luscio pears, and the ripest plums are alwa high on the outside branches of a tree, a there they usually hang for the birds a weather to destroy. I illustrate a little vice which has saved us hundreds of doll in time, fruit, and money. If you have one large fruit tree, it will be worth y while to make one. We have used it gathering figs and oranges since coming California. It is made as follows: Tak pole 10 or 12 feet long, and on top of t



attach a thin disk about five inches in ameter, or smaller for small fruit, set v wooden teeth like a rake. Carefully pl this under a pear or apple so that fruit r on the disk, and give a slight twist. It at once detach and bring down the f without marring or injuring it in any w

Why We Should Eat Mc Mutton

IS IT an inherited aversion to the tr tional "woolly" taste some muttor supposed to have, or because we hav been educated to eat it, that causes consumption of mutton in this countr be so small? Although we are the gr est meat eaters in the world, our percen of mutton per capita is lower than tha England, France, or Canada. While averaged 150 pounds of meat per perso 1918, only five pounds of that was l and mutton. Our pork consumptio fourteen times and beef consumption at thirteen times our use of mutton.

The British are the greatest mu eaters in tne world, as 22 per cent o the meat tney consume comes from sheep. France is next with about 11 cent. Canadians use about 7 per c while in the United States the averag only 3½ per cent. Having been bro up on a sheep farm, with memorie cunning lambs for pets, and with a early acquired taste for a choice "le mutton" wnich I still cherish, it is for me to understand why more peopl not appreciate this tasty meat. W. S.

Lifting 10 Acres of Bee Per Day

By Earle W. Gage (New York

OUR sugar-beet growers have suc fully solved the problem of comp with cheap foreign labor in handling acreages of this crop. They were h capped for several seasons, since shortages restricted the acreage po of handling, while the crop was matur the sugar content of the beets righ refining.

But with the invention and introdu of the crotch and side lifters, their pr was solved, and to-day a four-row lifter operated by a 45 tractor will out as high as 10 acres of beets per and do the same work as 30 to 40 men eight teams did in the olden days.

The crotch lifter has double p which run on both sides of the row, the side lifter has single points on the of long, thin, cutting blades, the common size being the one-row imple with but one point. This is called lifter, because the point runs at th of the row. The crotch type lifts onl row, while the side lifters are ma handle from one to four rows, acc to the power of the tractor.

Rainy days in October are excellent to put the tractor in shape for the season.

FARM and FIRESIDE Subscription Rates GO UP SOON!

WE HAVE been holding off this announcement for months, but the constantly ascending costs of everything that goes into the making of the magazine renders an increase inevitable. We will tell you the new subscription rates in an early issue. In the meanwhile THE OLD RATES HOLD GOOD. *So renew now before the increase goes into effect.* Your new subscription will be added to whatever time your old one has to run.

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Sorghum-Makin' Time

By J. Leland Crawford (Kentucky)

LONG in the fall, when the maple leaves begin to turn gold and brown, when frost is in the air, and all nature eparing for winter, we know that sor-n-makin' time is at hand, and we are

he first thing we do when preparing hum for the making is stripping the er from it. We go into the patch on a clear morning, just as the sun is ling above the eastern rim of hills, and the half-frozen dew hanging on the hum—and we shiver. But soon the cise and the rising sun's rays warm us. hen we cut the beautiful, shining ks and clip the heads of seed from them. put the sorghum, now somewhat re-bling a lot of fishing poles, on the ons and haul it to the mill. I have ys considered the sorghum mill a place weetness, if it is not always beautiful. unwary visitor is liable to rest his lders against a post and talk a while, to find himself stuck fast when he to move; or perhaps he has sat upon ry inviting upturned bucket, and finds the bucket persists in staying with when he decides to go. But we "who v" will wear overalls, and enjoy the t odor of the sorghum in every stage of making.

e unload the sorghum near the grinder, start old Jack on his endless road, h is pulling the sweeping beam that s the rollers of the grinder. I always ider myself fortunate if I get the job eding the sorghum grinder. This job not require concentration of thought, nly the regular feeding of the sorghum s into the rollers—and I am free to dream.

ıe juice as it comes from the cane is sweet, but it has too much of a greenish taste to be very good. However, most any farm boy can store a vast amount of it underneath his belt. When I have extracted a sufficient amount of this juice from the stalk to satisfy the thirst of all the boys present and fill the "pan," we place it over the furnace, and the first batch of sorghum is in the making.

From the time the juice begins boiling until it becomes molasses we who pride ourselves on making *good* molasses stand over the pans, carefully skimming off the waste that gathers as the juice boils. This we do with a long-handled skimmer. We usually try to throw these skimmings into an old bucket kept for this purpose, but they are almost always distributed over a good-sized spot of ground around the bucket. When the syrup begins to get thick these skimmings have a good flavor, and we bring the much-licked wooden spoon into play again.

As soon as one batch is cooked we begin another. The work is continued late into the night. Usually some of the neighbors gather in after dark to talk over the news of the day, and eat as much foam as they want. The big, open-mouthed furnace casts a ruddy glow around, and we lounge about in this light and swap jokes.

Long before daybreak the work is in full sway again. We start old Jack on his endless road again, and the sweet-smelling juice comes streaming from the grinder.

Each day's work is a repetition of the first one. Finally we have a year's supply of molasses made. We store the sweets away. Even if the sugar-beet crop is a failure, and the Cuban sugar crop runs bad, we have a goodly supply of wholesome fat and heat producing food—and we are glad.

t Your Customer's Eye

By F. E. Brimmer

)T long ago I found a truck farmer who has hit upon a rather spectacular effective way of catching the eye, rs, and cash of passing motorists. He



a windmill about 10 feet in spread of and mounted it in a conspicuous near the highway. It is a fairly good ature of the famous Dutch windmill, this in itself attracts the passer-by.

ıt he went farther than that. He eived the plan of making his repro-ion of a Dutch windmill do some tive advertising for him as its fans y revolved. He arranged suitable or grooves on the blades to receive rtising cards conspicuously lettered the names of various kinds of truck, , and produce in which he specializes. cards are tin or sheet iron, neatly red and painted, and few passers-by ing produce so uniquely advertised ıble to withstand the appeal. When they are enticed to see the produce sale is assured. A man having such nced ideas on publicity can be de-ed on to hold his customers by means ıality, once they are caught.

ıere are numerous publicity schemes h depend on some similar plan of al that can be originated. One es-al is to attract the eye of the public ome means that will please and cause nent. Then keep your publicity od constantly fresh and attractive. hen mounting a windmill as described, it is necessary to have it geared and governed so that the revolutions will be slow and steady, no matter what the wind velocity may be. A well-proportioned, neatly built mill, kept tastefully painted, becomes a widely known farm landmark, and can appropriately bear the proprietor's name and the farm name, which in this case cited is "The Windmill Farm."

What Can I Do On a Rainy Day?

By Edgar L. Vincent (New York)

HERE are some of my big jobs for a rainy day. It may be some folks would not think they amount to so very much. All right. I have learned that the biggest jobs I have to do are those that I hate to do most. Here they are:

Straighten up the harness-room. When every day is crowded full of things that simply must be done on the farm we are pretty apt to throw things round in the harness-room pretty promiscuously. Gets so it looks like sin, only more so; and this rainy day is just the best time to slick up.

Another good big job is tightening up the horses' shoes. I can do that all right. I have an old piece of a drag tooth, a relic from the days of the spike-tooth harrow, that I hold against the head of the loose nails, and with a light hammer I can draw the nails down tight, so that they will go several days longer.

Lowery days are a good time to bring up correspondence. Business letters must be answered the same day, no matter what else happens; but here are friendly letters waiting. I have no bigger job than to answer these. None pays better, either.

Again, it is a big job to go around the house and do the little chores that Wife knows about. Maybe a door that sags on the hinges and is scraping the carpet out. I drive out the hinge pins, tug the door out, and with cross-cut and rip saw cut it down to save wearing the pretty carpet.

But I think the very hardest task of all is to clear up my office desk. Piled so high with accumulated papers and stuff I dread to touch it. It really is a man's job to wade down through the heap and keep cheery. Can you do it? Then you are good for any big job.

The quiet-looking boy at the foot of the class had not had a question. The teacher looked at him severely, and asked:

"In what condition was the patriarch Job at the end of his life?"

"Dead," was the reply.



This Label Is a Guarantee of Quality

Surface Appearances Tell You Nothing

You cannot determine the quality of ready-roofing by its looks or its "feel." Surface appearances tell you nothing. The ability of ready-roofing to meet successfully the test of service depends upon the raw materials put into it and the manufacturing processes followed in making it.

When you buy Ru-ber-oid Roofing not a doubt need enter your mind regarding these two factors.

For over twenty-five years Ru-ber-oid has been regarded as the standard by which ready-roofings may be judged. It maintains today the enviable position which it reached when there was scarcely a competitor in the field.

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Therefore we say that the Ru-ber-oid label is your guarantee of quality. Ru-ber-oid is made to meet a standard of quality—the Ru-ber-oid standard—not a standard of price. That is why, after twenty years of service, the limit of endurance of many a Ru-ber-oid roof has not yet been found.

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ROOFING



Our Letters to Each Other

A page whereon we take a few lines every month to talk things over, so if you've got anything on your mind, let's hear from you

WHEN we haul out our old vest-pocket typewriter and swing into this page of letters, it seems just like sitting down comfortably in the evening for a visit with an old friend. We often wonder if you get that feeling in reading it, or if we just imagine it has a spirit all its own.

Anyhow, we like to think you feel that way about it. We all need a little plain visiting with each other to keep us polished up. Without wishing to draw any odious comparisons, we might illustrate that point by saying that, no matter how well the fire-blackened old teakettle may do its *work*, if it doesn't come in contact with the scouring cloth once in a while, it never *shines*. It lives in perpetual gloom. It is a pessimist.

And that's the way with human beings. Those of us who just grub along, never go any place, or do anything, or see anybody, soon lose touch and live in a gloomy, narrow little world of their own. These folks usually have the idea that others don't like them. That hurts their feelings, and they crawl in their shells and stay there.

What a mistake! The fault is with the ones who crawl in their shells and growl, not with those on the outside. The world has no use for a gloom or a grouch. We all have gloom and grouch enough of our own without taking on any from the other fellow's supply.

The man or woman who is most popular, and has the most friends in this world, is the one who keeps whining, and sorrow, and gloom, and sad accounts of trials and tribulations to himself. With that as a basic principle to start from, it is a pretty safe bet that folks will like you in direct ratio as you show that you like them.

Let that stand not only as a general statement, but also as a direct answer to a number of letters we have had along that line lately.

FARM AND FIRESIDE

The National Farm Magazine

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You are invited to ask questions of any or all of these men in their respective fields. State your problem clearly and fully, enclosing a stamped self-addressed envelope for reply. Address each editor care of Farm and Fireside, 381 Fourth Avenue, New York.

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That's Right, Montana

The Department of Agriculture's Weekly News Letter says that a large number of Montana Farm Bureau members have organized a State Farm Management Association, and will offer over $300 in prizes for the best showing of business farming. There will be $100 for the best-kept farmer's account book, $100 for the best-organized farm as shown by the account book, and a $100 combination prize covering both points. That certainly is the right idea. We have long since passed the point in farming where it was merely a question of production. Most farming folks have got their production problems pretty well whipped. The biggest step we can take now is to develop ourselves into thoroughly good business men, getting an equally firm grip on problems of marketing and management. What good will it do us to produce great crops if we don't manage the farm to know what those crops cost us, and if we don't market them in such a way as to bring us a profit on what we have to sell?

Of course, Montana isn't alone in things of this kind, but we merely mention it as a step in the right direction, and one which might be imitated to advantage elsewhere.

What Is "One Horsepower"?

A farmer friend of ours the other day got to talking about labor-saving on the farm through the addition of power machinery—the truck, tractors, automobiles, light plants, and other gas and electric appliances. He said it would be interesting, as a basis of comparison, to know exactly how much human and animal labor "one horsepower" replaces. So we looked it up, and here it is:

To do a day's work equal to one horsepower requires the efforts of three strong men, and for three eight-hour shifts there would be required nine men. At the wage rate of about $2.25 per day this would be about $20, or $7,300 per year, per horsepower.

To do the work of one horsepower with horses instead of men will cost approximately one tenth the above amount, or $2 a day, and $730 per year. To do the work of one horsepower using electric power at 1.1 cents per kilowatt-hour will cost $72.30 per year, or about one tenth the cost of the work done by horse and about one per cent of the cost of man.

This shows the relative economy of doing things by machinery, but the figures take no account of the fact that human power and animal power cannot be organized as can electrical and mechanical power to produce a steady and large output. When this fact of speed and output is taken into account, it illustrates how rich a man would be with 100 horsepower at his disposal, at a rate of 1.1 cents per kilowatt-hour, compared to the man who tried to do the same work with 1,000 slaves, working for no pay whatever.

A Hard Question, This

"I have," writes J. T. of Ohio, "been a faithful reader of FARM AND FIRESIDE for ten years or more, and have been much interested in the topics which it discusses. I am not a farmer myself, but only a farmhand; but don't we come under your wing too?

"It seems to me that all one hears now is comment on high prices and especially the high price of labor. I don't know much about wages in the city, but I do know what farmers are paying their hired men in this part of the country, and I know that it is little enough.

"Of course I realize that costs are up, and that it takes a lot of money to buy labor for a farm now, but it certainly is discouraging for one in my position to try to get ahead. I can remember when I worked as a boy for as low as 25 cents a day. It was a big day's work for a kid.

"Then I got so I could earn 50 cents a day, and I certainly felt like a young millionaire when I was paid off Saturday night. Then I grew to be a man, and got $1 a day, and shortly after that wife and I were married. We could save a little money in those days, even on a dollar a day. Then it went up to $1.25, and then to $1.50. Prices had begun to go up in the meantime.

"We have been on the same farm now for ten years. Our boss is a good, hard-headed farmer, a money maker, and a good manager. He has always been fair with us, and I have nothing to complain of in his treatment. He furnishes us a comfortable tenant house. He boosts his wages just as soon as anyone around here, and always gives us some sort of remembrance at Christmas. Last year it was a barrel of flour and a load of coal. Some years it has been less, but always a useful gift, such as a sheepskin coat or a pair of felt boots.

"He lets me have corn and other feed a little below market price, so I always have kept a cow, some chickens, and a few pigs. My wages are now $2 a day, but it doesn't seem as though we could save any money, no matter how we skimp.

"It has always been our ambition to save enough to rent a farm somewhere on shares, and thus make a start toward buying a place of our own. We have saved a little money in the past, and have it safely put away in a building and loan association, but it isn't enough to more than buy a good team and wagon now, and prices are so high that we hesitate to try to do anything until things settle down.

"One of our girls (we have three) has finished high school, and has been teaching school two years. Last summer she went to a normal college for a while. The next oldest will graduate in another year. She wants to go to college to take domestic science, but we won't be able to send her. We could have saved a little more money, but we wanted the girls to have as good education as we could give them. Then the wife has always kept our little cottage looking neat, and we all have decent clothes to wear for Sundays at least.

"I feel sometimes that I could save more money if we went to the city, where they pay big wages, but I know that living expenses are much higher there too. What would you advise me to do? Do you think I ought to leave and go to the city or another part of the country where wages are higher? Is there any way we could borrow money to get on a farm of our own? Any advice you can give us will be greatly appreciated."

The solution of the problem of the farmhand's wages, J. T., does not lie wholly with any one person. And it is a very serious problem, which ought to be settled. If the city folks read what I am going to tell you here they would rise en masse and curse and revile me; but they probably won't see it, though I don't care if they do, for it's the truth.

Your boss has got to get more for what he produces before he can pay you more for helping him produce it. Consequently the folks in town will have to pay higher prices for their food before your boss can get more for his crops. They, sad to relate, have an insane notion that all the farmer has to do is *produce more* to bring prices *down* to them. They have their minds set on cheaper food. They are kind of crazy on the subject. Their minds have got to be changed before your wages can be raised. You see by this that it really is a serious problem you are up against.

Of course there are a lot of middlemen taking exorbitant profits on the food you help to produce, between the time it leaves the farm and the time it is sold to the consumer. There is a lot of waste in our marketing methods. That is why FARM AND FIRESIDE is always harping on the importance of the farmer devoting time and study to marketing and mana problems, just like any other manuf does. Middlemen's profits is anothe that will have to be cleared up befo wages can be raised.

And of course the folks in town entirely unjustified in not wanting more for their food. They aren't more than enough to live on now, them. Consequently *they* are dem higher wages for their work in ma turing the farm machinery you us the clothes you wear, and the sho buy. And if their wages are rais manufacturer will again boost the the machinery and shoes and thin sell you and your boss, which wil add to your boss's expense and another boost in *his* prices and your

You see, it is a vicious circle. T which upset wage standards and tion standards in every line of activity, has hurled us all off of ou fully prepared and delicately a perches in the scheme of wages and factures and all the other parts great commercial and industrial st that was built up and running smoothly before the war, and no all trying to get readjusted.

Your income, as you say, has in as your boss's income increased. can't save as much on $2 a day you used to save on 50 cents a day years ago because your income increased as much nor as fast a costs went up; neither has your neither, as far as that's concern mine. Three years ago my wife could set our table for $5 a week. it costs us between twice and thre that, and we don't have as much as we had then; that is, for those of the year when we are compelled in town.

You and I look with delight up man who pats us on the should voices the opinion that prices wil down so that our income will more equal our outgo. We hope he is but I, for my part, don't think tha are coming down at all. The workers who got such good war and used the money to get a taste o living—better houses, better clothes, food, more recreation—are human. will *not* let go of those better things can possibly help it. They will d thing, including rioting, to keep wages up. Consequently the m turers they work for will keep pri About the only answer I can see increase the prices of farm produ the farmer immediately, so that you can be raised, and then let the f folks set about systematically to i their marketing methods, and the facturers and distributors to improv ufacturing and distribution meth cut out the money now wasted o in the form of excess profits there

That's where you and I come in they call the "packer situation. farmer isn't getting enough to pay producing meat, he says. The pack he can't pay him any more tha paying him. The consumer says afford to eat meat any more bec can't pay the high prices demanded packer for the steaks the packer from the beef your boss produces. body is *wrong* on that proposition and has got to be set right. Th country is aroused over the pro manufacture, and distribution si J. T., and some sort of a solution to be arrived at before very long.

However, there is one thing yo do instead of sitting down and wa the nation to work out this proble might make a valiant effort to ge the farmhand class. If you are farmer, with the right stuff in yo believe you are, you *can* find oppor to get ahead. The spirit required shown by John Manning, the youn er who, on another page of th tells the story of how he pulled out of the hired man class and got of his own. He didn't have much but he had brains, and ideas, and money, as you say you've got, a put it over because he also had th *mination* to win. GEORGE MA

FARM & FIRESIDE

The National Farm Magazine

NOVEMBER 1919 5¢ A COPY



In This Issue—

Should Farmers Advertise?

The New Overland 4, with Three-Point Cantilever Springs, the Greatest Improvement in Riding Comfort Since Pneumatic Tires

THIS handsome new Overland *has a Springbase of 130 inches*—yet a wheelbase of only 100 inches.

It is a new type of car with a new standard of riding comfort.

The springs are Three-Point Cantilever springs of Chrome Vanadium steel, a new type of spring exclusive with this new Overland.

They give the Overland 4, with its light weight and ease of driving, the road-comfort and road-steadiness formerly confined to heavy, expensive cars of long wheelbase.

They end the ordinary bouncing, vibrating over the bumps. They stop the usual swaying, twisting and jars that fatigue the passengers and rack the car.

The wheels and springs go up and down, following the bumps, but the passengers and car are shielded from road blows. The Three-Point Springs protect the mechanism from road injuries and prolong the life of the car.

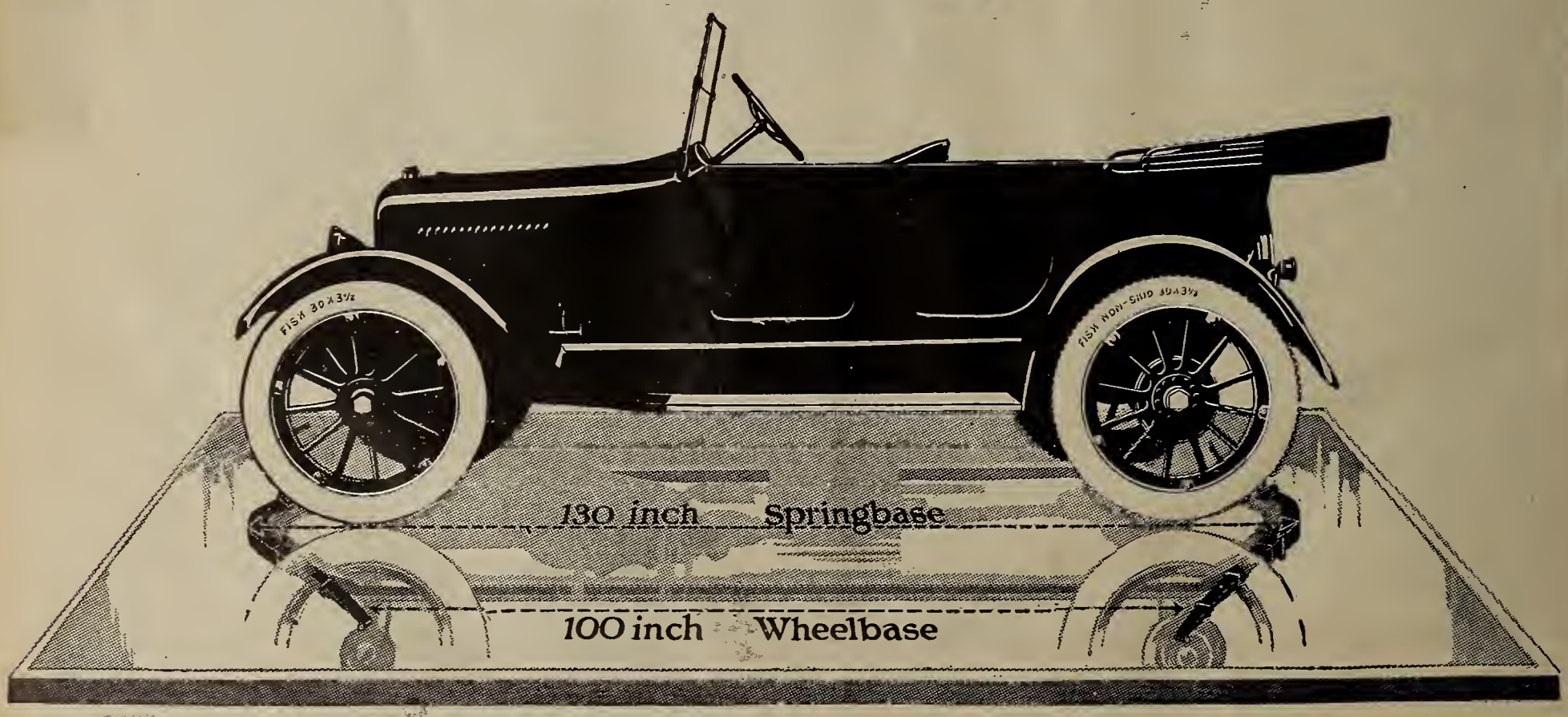
Light weight brings great economy of tires and gasoline.

High quality materials and workmanship are used in Overland 4 throughout. Its equipment is high grade, complete from Auto-Lite Starting and Lighting to Demountable Rims.

Ask the Overland dealer to show you this new motor car which has been tested more than 250,000 miles, let him explain to you its exclusive Three-Point Cantilever Springs, then—

Select rough roads that you formerly dreaded to ride over and see what it means to ride in Overland 4.

Overland 4 Touring, $845; Roadster, $845; Coupe, $1325; Sedan, $1375. Prices f. o. b. Toledo.



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Sedans, Coupes, Touring Cars and Roadsters

Willys-Overland, Limited, Toronto, Canada



GOODYEAR

AKRON

Battery Life Depends upon INSULATION

1



There's only one sure-fire preventive against aging on the shelf—that is to store the batteries in true bone-dry condition, which is possible only with the Willard Battery containing Threaded Rubber Insulation.

2



The life of the battery is largely up to the man in the car, but Threaded Rubber Insulation adds greatly to its chance of long service, because it removes one of the commonest causes of battery trouble—breaking down of the insulation.

3



Nearly every battery with *ordinary* insulation has to be re-insulated at least once during its lifetime. Willard Threaded Rubber Insulation never has to be replaced.

Threaded Rubber Insulation has these three distinct advantages over any other:

1. Threaded Rubber Insulation eliminates depreciation in the dealer's stock.

Willard Batteries with Threaded Rubber Insulation, since they have no wood insulation in any form, can be shipped and stored bone dry—since neither plates nor insulation in the battery have ever been wet.

The storage battery with wood insulation in any form can not be kept in a dealer's stock without depreciation, because wood insulation must be put into the battery wet at the factory, and, once the insulation is wet, a continuous chemical action begins; and furthermore, the insulation can not be allowed to be dried out, as it would become damaged. Hence the battery must soon be filled.

2. Threaded Rubber Insulation returns bigger dividends to the user.

Threaded Rubber Insulation is a manufactured product held to rigid uniformity, more durable and long-lived than any wood can be. The car owner is not wholly relieved of caring for his battery, but the battery will stand more abuse, and function at high efficiency for a much longer time.

3. Threaded Rubber Insulation makes re-insulation unnecessary.

When installed in the car no one can say just how soon wood insulation will begin to break down, on account of the impossibility of securing absolute uniformity in wood, since it is the product of nature, not of scientific manufacture. During this period even careful driving and faithful attention to battery care will not absolutely insure long life.

Re-insulation—at considerable expense—is almost certain to come before the ordinary battery is worn out, and the life of any battery after re-insulation is uncertain.

Threaded Rubber Insulation outlasts the plates and re-insulation is, therefore, unnecessary.

Willard STORAGE BATTERY

Willard Threaded Rubber Insulation

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Should Farmers Advertise?

By George Martin

IN a recent batch of mail there came to my desk a bulletin and a letter. I read the letter first; it was from an apartment-house dweller in Chicago. Boiled down it was this:

"As a long-suffering, tax-ridden, deeply-gouged consumer I appeal to you for help. You print articles about the successes of those who produce our food, would it not be fair play to print something about the plight of the customers of those producers?

"We investigate through Congress the trusts when they apply the monopolistic principle to the distribution of meat; the stockmen who raise that meat and to whom the greater part of my tribute goes when I buy a pound of it—those men are overlooked. Congress allows farmers $2.26 a bushel for their wheat, and the Federal Grain Corporation forthwith gets a club for the millers, who charge me only a tithe of this authorized price inflation. To-morrow I must pay a cent more a quart for milk, but the dairymen are scattered and seemingly immune to punishment for this robbery. My wife goes to farm wagons at markets, and there is held up for the vegetables she buys.

"Why should the farmers of this country be granted immunity to the penalties of profiteering? Why shouldn't they be investigated and made to feel the weight of the hand of equity? Why should the monopolistic principle be tolerated in production and scourged in distribution?

"You owe it to your readers to play fair with both sides; as it is now, we as humble consumers are helpless tribute bearers to subsidized tyrannical production of the basic necessities of life."

I read this letter and absently picked up the bulletin. It dealt with the cost of producing milk in the State of Illinois. Then somehow it all came over me that here before me lay the reason why the farmer is a "profiteer."

The irate apartment dweller had read newspaper reports of hearings when the meat packers were grilled in Congress by Francis J. Heney; and he had read what Julius H. Barnes, president of the United States Grain Corporation, had said to the millers. Also he had read, day after day, heavy-type advertisements by the packers which were like kicks in the face—how it was impossible for packers to control the price of meats, how their profit on a pound of it is only a fraction of a cent. So had his wife read these things.

He was convinced that the bulk of his dollar for meat went to the stockman—the packers told him so. Every day they did. He knew that farmers were receiving $2.26 for their wheat—think of it! He knew that his milkman was charging him a cent more for milk simply because the dairy farmer's price to the milkman had been raised a cent. He knew these things, and was sore.

But he had *not* read that bulletin which strayed to my desk, and which showed what a complex, expensive operation it is to produce a quart of milk; he had *not* read what it cost the cattleman who got the bulk of his meat dollar to raise that meat; he had not read that many a man who sold $2.26 wheat did so and felt relieved when he broke even, and peeved when he thought of what he might have sold it for if the price hadn't been fixed.

As a matter of fact, this man had *not* read *anything* about the producer's costs and risks and failures which came to his attention only when meat and milk and flour and fruit and spinach went up in price.

Now, this city dweller is but one of millions. He is fair-minded and honest in his outburst against the increased burden of the cost of existence.

He is fair-minded according to his lights; yet he has received light on but one angle of the question.

He is honest in his criticism; yet he has been provided with but half a premise for that criticism.

And every day that he and his kind live on half-rations of enlightenment, just so much is the gap widened between himself and the farmer.

Who reads these vital bulletins like the one on my desk? Farmers and workers in experiment stations. Their circulation is strictly in the workshop. And there they have great value.

But this Chicago man and his kind, who hold a smoldering resentment against the producer, are allowed to go in ignorance of these simple facts regarding costs.

When the packers decided they should clear up the haze of suspicion hanging about their business practices, did they circularize stockmen with the announcement that they were making only a fraction of a cent profit on each pound of meat distributed through their machinery?

No, they went straight to the public, and took it into their confidence.

When the dairymen have been under public criticism and condemnation for higher prices charged by milk distributors, is it policy for them to circularize dairymen with reasons for these increases?

The farmer is the greatest producer in America, beside whom the steel barons and automobile monarchs dwindle to Lilliputian stature. Without his products the wheels of industry, the very pulse of life, would halt.

Yet the consumers of steel have a sympathetic understanding of the steel industry, and they know the why and the wherefore when its price increases; and automobile buyers take pride in their knowledge of the business romance behind the finished product which they buy to-day at a higher price than yesterday, and never feel outraged. The steel maker and the auto maker see to it that the public has the facts as to why those increases are necessary.

Practically every industry except agriculture has taken the public into its confidence.

A chain of the most successful hotels in the United States has built its phenomenal success upon the policy of selling the utmost for the service price charged. Its desk clerks call you by your name from the moment you register until you leave; in the morning there is a newspaper under your door for you to read during breakfast; on your bureau are needles, thread, buttons.

But on this bureau also are two or three attractively printed folders—*to you*. They take you by the arm and tell you just what it means to run such a big hotel, how every employee is trained, how many troubles the management encounters in just one day, what it wants to give you for your money, and how it is always scratching its head to give you just a little more than you expect.

All these things the folders tell you, and then wind up something like this:

"Now, old man, we're doing the best we can for you—*to-day*. To-morrow we will do better than this—*if we can*. We want you to be satisfied and to leave with a smile.

You see, we can't do business without you."

These hotels sell service. They have something to advertise. They advertise to their *customers*.

You go to Detroit and a guide takes you through a colossal automobile plant; you leave with a keener, more enthusiastic appreciation of the finished product. You have seen a flash picture of the gigantic overhead costs, the great labor costs. You don't begrudge the money you pay for the car, for you have some idea why it is charged. And you know the car is worth it.

A manufacturer of farm machinery works up a big farmer excursion to his plant. He serves them lunch and conducts them through the works. They see raw lumber transformed into plow handles, pig iron leaving the plant as glistening plowshares. They see the care, the great pains expended to make those implements worth all that is charged for them. And those farmers when they go to the local stores for implements take a just pride in the fact that they are buying products which they *understand*.

But the apartment dweller or his wife must go to the butcher's stall and buy a cut of meat in total ignorance of what lies behind it in the making. They know the meat is shipped alive to the packers by you—and the packers have drilled these buyers in *their* story. The consumer doesn't know *your* story.

They cannot visualize the feed lot on $300-an-acre Middle Western land, nor the master technique with which sires and dams are chosen to produce the animal yielding that cut of beef. They cannot plank down a dollar with the flash picture of its duty back in Iowa or on the Western plains, where it must be divided up for depreciation on your equipment, cost of feed, cost of labor, losses from animal diseases, vicious winters, and accident.

They cannot understand that, while the automobile plant and the farm machinery can run twelve months in the year, the plant of yours in which this meat is produced must virtually shut down in winter.

They don't think of the great game of chance that you play with the weather above your outdoor plant.

They know nothing of hauling this finished product over poor roads, to find a car shortage at the shipping point, and consequent losses because of this delay.

None of these things, nor a score more as vital, does the consumer know. Therefore he is not an intelligent purchaser of what you produce. He is not in sympathetic understanding with your product and your price. And out of his ignorance leap up the small red flames of resentment against you—the unseen thousands of farming men whose plants produce his food.

In the past we have shrugged our shoulders at these deplorable conditions and said, "Too bad!" Then we turned to a fresh interest. And all the while the inequity of this misunderstanding has been allowed to feed the fires of resentment and broaden the gap between farmer and consumer.

This must not go on!

Yesterday's theories and practices are being scrapped every hour—to-day. The entire human race and its economic and social equations are standing trial before the bar of an altogether new era. Social and economic unrest no longer finds a narcotic in the words of professional mollifiers.

The new covenants of civilization demand that wrongs be righted and misunderstandings cleared away by constructive action.

If consumers have not had faith in you farm producers because they haven't had the facts, then you must place the facts in the hands of the consumers.

If the public condemns unjustly the producers of its daily bread, and that condemnation springs from fancied injustices reflected in prices, then you, the producer, are on trial and owe an unreserved account of yourself to make the consumer understand.

[CONTINUED ON PAGE 55]



New England's Champion Sheep Shearer

DENUDING a sheep of its coat of wool by means of a pair of old-fashioned sheep shears may be a lost art on the great ranches of the West, but up in Maine the annual wool crop is still clipped that way, and the champion manipulator of the shears in that State and in New England is A. E. Hodges of Vassalboro, Maine, whose picture you see here.

Mr. Hodges has been shearing sheep since he was a boy, and he is now getting along toward three score and ten. He learned the trick on his father's farm. His record, established ten years ago, is 59 sheep clipped in ten hours. This record stands in Maine and New England as the best. On the day the accompanying photograph was taken Mr. Hodges sheared 19 sheep in a forenoon of four hours. This was at Long Branch Farm in the town of Bowdoinham, Maine, where is owned the largest flock of sheep in Maine, 2,500 head.

SAM E. CONNER.

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Would You Like to See the Farm Loan Limit Raised to $25,000?

By Earle W. Gage

WILLIAM COLLINS of Adair County, Iowa, wants to buy more land, but he, like thousands of other farmers, has discovered that the Federal Farm Loan Act was so framed as to keep him outside the enjoyment of the system. The loan limit to individual farmers through the national farm loan associations is $10,000. Since five per cent, or $500, of this sum must be in the form of a subscription to the capital stock of the district land bank, William would have but $9,500 in spot cash, whereas, he needs $20,000 to put over the program he has mapped out.

D. P. Hogan, president of the Federal Land Bank of Omaha, serving Iowa, has known Mr. Collins for twenty years, and told me something of his record.

"I knew him as a farm hand, and he attracted my attention on account of his honesty and industry," advised Mr. Hogan. "William was not yet twenty-one at that time, but he had saved enough from his wages to buy a team and a set of harness. I loaned him enough to buy another span of horses, some farm machinery, a little start in brood sows, a couple of cows, seed corn, horse feed and some household furniture, and asked the merchant to give him credit for such groceries and work clothes as he would need until he grew a crop.

"William set to work with right good will," continued Mr. Hogan. "His sister kept house for him, and he had splendid prospects for a good crop, when on the twenty-fifth day of July his entire crop was utterly destroyed by a hailstorm that devastated that locality. William had just cut a couple of rounds of his oat crop, and the rest, along with the growing corn and hay, was beaten into the ground.

"The next day William came to town thoroughly discouraged, and told me he was worse off than nothing; that his property would not bring what he owed, but that he would turn everything over to me to pay as far as it would go, and then go to work again as a farmhand and earn enough to pay the balance.

"I just told William to brace up; to go back to the farm, make the best of it, keep his stuff, and prepare for another year. I loaned him enough more money to purchase several young cows, and their milk paid for his living for another year."

Mr. Hogan reflected back for the next link in the story of William Collins, and continued:

"The next year was a good one; prices were good, and William got on his feet again. The teacher of the district school boarded with him and his sister, and before another year closed William married her. They worked hard and saved every dollar possible, doing without everything except the barest necessities; but they were happy and cheerful, taking pleasure in their work, in their growing children, and in watching the growth of the fund they were saving to purchase a farm home of their own.

"William went into the field early and worked late, cheered on by his helpful wife, who had most of the chores done when he returned from the fields in the evening, and helped him milk the cows when the flies ceased to pester them. Mrs. Collins raised several hundred chickens every year, thus adding to the fund with which to purchase the farm they hoped to buy.

"After several years they managed to accumulate sufficient money to make a payment on 160 acres of land, the seller of the land taking a mortgage back for about three-fourths of the purchase price. They continued to work hard and live very modestly, not even buying a motor car until two years ago.

"Mr. and Mrs. Collins now have a family of four boys and two girls, the two oldest boys being old enough to work in the fields, and each do almost a man's work during the farming season. The other two boys will soon be able to help a lot.

"The rub is right here: William now wants to buy more land so that he can keep his family with him on the farm. Even now there is hardly enough work for himself and two boys on the 160 acres. Unless he buys more land, he realizes that the boys will soon leave home and seek employment as farmhands or go to town.

"A farm of 80 acres, adjoining William's 160 acres, is for sale at $200 an acre. He thinks the price is high, but it is close by, is a good farm, and is worth more to him than land further away."

William, having been acquainted with Mr. Hogan for years, thought he would see if he could secure financial aid of him, since he is now presiding officer of the district land bank. As he still owes $4,000 on his 160 acres, he needs $20,000 to cover this and buy the 80 acres. But the land bank cannot now, as the Federal Farm Loan Act is framed, loan William to exceed $10,000.

William did discover that the nearest joint stock land bank (which is a privately operated institution, under the Federal Farm Loan Act) would loan him the $20,000, but that they would ask six per cent under the amortization plan, whereas the land bank asks but five and one-half per cent interest.

And William and his wife did some figuring. They discovered that if they took the joint stock land bank mortgage for $20,000 at six per cent, the annual difference in the payments would be $100 in favor of the private owners of that bank, and that at the end of ten years they would lose just $1,216.19, which could be saved if they could borrow through the land bank. William wondered why the fathers of the Federal Farm Loan Act permitted private individuals to loan money—making a "rake off" of one half of one per cent interest—in larger sums than they would permit the farmers' federal land bank to loan money.

But this is not all that William and his wife found they would lose. President Hogan informed them that the Federal Land Bank of Omaha is now making net earnings to its borrowers of twelve per cent per annum, which belongs to them as co-partners of it, which would provide an additional saving of $810.12 on a $20,000 loan, or a total saving of $2,026.31 under the Federal Farm Loan Act, if the loan were closed through the land bank instead of the joint stock land bank. In other words, William could put this sum into his own profits, if the act were made so that the farmers' bank could really finance farmers requiring loans of this size, instead of into the profits of those operating the privately owned stock banks.

There are thousands of farmers in the United States who, like William Collins, require financial support to a greater extent than $10,000—$9,500 net cash. The case of Lyon County, Iowa, is a typical illustration of many of our best farming communities. A recent survey of this county shows that there are 1,669 farms in the county, worth on an average $33,000 each. The live stock, work horses, machinery, and other equipment essential for the profitable operation of these farms would bring the total capitalization up to $50,000.

Lyon County also boasts 16 banks, with an average capital of $42,000, so that it requires $8,000 more to operate the average of the 1,669 Lyon County farms than the average banking house.

One reason why some have stood against increasing the size of the mortgage to farmers is because they have the idea that farming is a small industry, composed of a whole lot of men doing a little business. To the contrary, American farming is one of our greatest industries, demanding as great scientific intelligence as any business. During the war this was too well demonstrated to require restatement here now. The fact that our farmers exported $750,000,000 worth of foodstuffs, while our manufacturers got $500,000,000 worth of goods together for Europe, is sufficient evidence on the point of American farming being big business. And big business requires capital, more capital than the present Federal Farm Loan Act provides in thousands of instances.

Others feel that the bonds sold on federal farm loan mortgages would not be secure if the sum were advanced to the required $25,000 mark. Take Lyon County again as an illustration: Suppose that a $25,000 mortgage were placed on 70 per cent of these 1,669 farms, worth $50,000 fully equipped—is it any more of a risk than for federal reserve banks to loan up to 90 per cent of the actual value of grain elevators, mercantile stocks, etc.? The Lyon County farmer, in his farm lands, supplies the best security in the world.

Heretofore the Lyon County farmer has had no adequate system to supply his long-time farm-loan needs. The banker in Lyon County can supply his customers with short-term commercial needs by taking their notes to the [CONTINUED ON PAGE 54]



Dinnertime on the Stovall ranch

Raising Calves in Oregon

WE RAISE a great many skim-milk calves on our Western mountain ranch, and are confident that a skim-milk calf makes a sturdy, healthy, and productive cow if due attention is given to feeding. We take our calves from the cow on the second or third day, and teach them to drink from a pail. For the first few feedings, so given, the skim milk, given fresh and warm, is mixed with one-third portion of straight cow's milk. But after the first week, skim milk alone is fed to the calves.

The main thing is to have the pails clean. The bucket from which a calf drinks ought to be just as clean as one from which a human being would drink. Which means it must be regularly washed, rinsed, and aired. A foul, dirty bucket will make a sickly calf and a poor cow. Skim milk, diluted with water, may fill the calf, but will not nourish. Skim milk, brought home from the creamery, is not only sour, but also contaminated. We have a neighbor who lost a number of valuable calves in just this way, and brought disease into his herd.

We give our skim milk to the calves just as quickly as it can be conveyed to them from the separator. In this way they get it fresh and warm. We balance it up a bit with flaxseed meal, particularly for the younger calves, as this makes them grow more rapidly, and puts greater strength into their bones. Having a clean pasture, and feeding racks all their own, the calves soon learn to nibble grass and to eat clover or green vetch hay. DENNIS H. STOVALL, Philomath, Oregon.

Drawn by E. W. Kemble



"Dat chile do keep me hustlin'—first wid a bath an' den washing her clothes!"



"Dar she gwine plumb inter de tub!"



"Now, den, I kin do bofe duties at one time."



"An' it suttinly am some time saber."

The Thing You Want May Be Right at Your Elbow

By J. S. Cates

Illustration by Jessie Gillespie



You can see more with the naked eye than you can with a telescope

THERE is one outstanding thing about the development of American farming which you and I ought to recognize and use to better advantage, and that is the fact that we are not learning as much from the people and things right around us as we should learn.

No individual is very original. The man who appears to be most original is, for the most part, merely applying ideas which he has picked up here and there. Few of us ever originate anything out and out. We merely go a step farther than something we have seen or heard about. How often have you heard the expression, "and that suggested an idea to me!"

I have spent most of my life studying about farming. I have carried on line after line of experiments trying to solve important problems, and I have a few times succeeded in solving them in this way. But I have come firmly to the conclusion that the best way to study farm problems is to study them on farms of the men who have worked them out in a practical way.

I have found that most of the practical problems which experimenters are working their lives away trying to solve have already been solved by some farmer, and that these experiments could save a lot of time and bother if they would go round and see what the farmers have already found out, and publish this. There is always a large group of farmers who would profit highly by such information.

W. J. Spillman tells a story of his experience out in Washington State which illustrates this point exactly. When he was professor of agriculture there, many years ago, he got interested in studying methods of summer fallow. He sat down at his desk one day and thought out a lot of methods of fallowing that might be used. He then laid off a lot of plots of land out on the experiment fields and tried out these methods.

One method proved far superior to all the rest. It looked to Spillman like a big discovery. The following summer, at a big farmers' meeting, he told about these experiments and the results. He fairly bubbled with enthusiasm as he recounted how this one method of fallowing had led to such big results.

The audience, however, did not warm up very much. All the farmers looked bored, a few smiled, and others just yawned. The young professor was crestfallen. At lunch time that day he asked one large wheat grower for a frank opinion of his talk of the morning.

"Well," said his friend, "your talk was all right, and that is a good method of summer fallow, but in this part of the State everybody has been using it for ten years. Farmer Jones down the valley worked it up, and it proved so successful that we adopted it long ago."

That is how Spillman got the idea of establishing the National Office of Farm Management, which was based on finding out what the farmers themselves are doing, rather than attempting to work things out by experimenting entirely.

Just as the farmers as a class worked out most of the things that the experimenters are puttering around with—because every farmer is an experimenter as well as a farmer, and there are six million farmers, while there are only a few thousand experimenters pure and simple,—so has some farmer in your community worked out something that would be highly valuable to you and the other neighbors.

A few days ago I was down at Washington and dropped into the Office of Corn Investigations at the Department of Agriculture. The corn expert, Mr. Hartley, showed me a letter he had got that morning from a farmer in Maryland. This man had decided that he needed a change of seed corn. His yields were low, and he had come to the conclusion that it was due to using a poorly adapted variety. He wanted advice as to where to get seed. Mr. Hartley replied that probably the best seed corn in the State was being sold by one of his neighbors, and suggested that he drive up the road less than a mile and get some of it. Maybe there's an eye-opener like that awaiting you within a few miles of your place.

Last summer a new county agent went on the job out in a sandy section of the Middle West. Before very long the state leader dropped in for a day with this agent. The local man remarked that he had had an inquiry from a farmer as to how brome grass would be adapted to the region, and would like to get some seed and have one of the farmers make a trial.

"My dear sir," replied the older man, "among any two thousand farmers dozens have tried brome grass, and most every other grass for that matter. Brome grass is no doubt growing in two or three places in less than five miles from here."

At the next farm they stopped to make inquiry about the matter. They were directed to a field of brome grass less than a mile away. The man who was raising it was enthusiastic about it. *Less than three miles away lived the farmer who had sought the information as to how it was adapted to the region.*

This failure to look and see whether the thing you want isn't right at your elbow is not confined to farmers by any manner of means. I know a number of cases of supposedly shrewd business men and manufacturers who have made the same mistake.

I remember one instance that happened shortly after the beginning of the European war. A certain big manufacturer who used large quantities of a particular mineral in making his product had his supply cut off from Germany. This material never had come from anywhere else in the world. The man was distracted. He was on the verge of closing his factory when he decided, as a last resort, to employ a research man to see if he could dig up a substitute material anywhere outside of Germany.

Within three weeks the research man had discovered an almost limitless deposit of this very material within a stone's throw of the man's factory, and it was on property which had been owned by the manufacturer for years.

Nor should we let pride or prejudice keep us from using the experience of other men, if it will help us succeed.

Down in the mountains of southwestern Virginia a well-known horticulturist has a 50-acre apple orchard. His trees are pruned and sprayed in an ideal manner. His spraying is done with a high-pressure outfit, and the whole handling of the orchard is in fact about as efficient as could be imagined. Right in this same region are a lot of other orchardists who have not had the advantage of the training which has been the lot of this man. Few of them have taken advantage of this easy method of learning the best orchard practice. I am inclined to think the reason here is that this expert orchardist is an outsider. Perhaps when one of his neighbors copies his improved methods the others will follow. When a neighbor succeeds, however, it is wise and highly profitable to watch him, even though he be an outsider.

I spent a day a short time ago with a farming expert who was advising with the boys who wished to go to farming.

One young soldier had definitely in mind just what he wanted to do and where he wanted to go. He had spent most of his young life on a farm in the Middle West. He planned to go South, and take with him the system in use on his old farm in the Middle West. The expert pointed out to him that his plan would be very hazardous. That the system to follow was a matter of geography. With change of geography there is change of soil, climate, and, what perhaps in most cases proves to be a far more determining factor still, a change in economic conditions. The thing that is profitable in one region, though it might succeed as a productive enterprise somewhere else, still might fail to make money. The expert wound up his talk with this man by advising that he study his new neighbors, and learn thoroughly the best system they had developed before he put any new ideas into effect. New ideas are fine, because they are what makes farming move ahead, but we ought to know all the old ones first, so we won't make the mistake Spillman made.

The most fatal mistake a farmer can make is to choose a type of farming unsuited to his conditions. If he gets very far wrong in this respect the sheriff finally closes him out. That is the reason types of farming utterly unsuited to a region are rarely found in that region, except when conducted by some rich city farmer who just likes to see certain things grow or to have certain types of live stock around, whether these things pay or not. And, of course, you and I are not concerned with that. Farming is a business, not a plaything, to us.

Some farmer near you, however, may have worked out a slight variation in the same general thing which your community is engaged in, and this variation may be highly profitable to you. That is the thing to grab. There are a thousand and one little things which, if you could get and put them on your farm, would improve your place 100 per cent.

Always go after the other fellow's practical experience. An abstract theory usually makes but little impression on me. But cite a case in which this theory has been applied and I am immediately interested. The best county agent I know told me today that if he could avoid it he never answered a question about farming without citing a case where it had worked.

A farmer, for instance, had just asked his advice on how to put out some alfalfa. His reply was that Farmer So-and-so, three or four miles away, had the best alfalfa field that he knew. Then he told just how this other farmer had proceeded to get this result. The thing was reduced to a definite case. The success of the other man carried a force which he could have given his advice in no other way. The farmer who wanted the information felt that he had a sort of information that he could depend on. If this county agent had merely launched into a recital how to put out alfalfa, his advice [CONTINUED ON PAGE 33]

Distance Lends Enchantment, But That's About All

WE HUMAN beings are funny folks. We seem to think that because a thing is far away and hard to get at it must be better than anything we can pick up near at hand. A woman in Falls City, Nebraska, will go to Kansas City for her clothes. The Kansas City woman goes to New York. The New York woman goes to Paris. Paris women like things from New York.

A man we know in the Middle West traveled all the way to Vienna to consult a famous physician about his health. When he got there the physician told him that the only place in the world that could cure him was a spring *within fifty miles of his own home.*

The same thing applies to your farming. A man in your own township, whom you meet at market a dozen times a month, may be able to give you more help than an expert 1,500 miles away in Washington. This is not *always* true, but it holds good in enough cases to be worth thinking about, as Cates suggests. THE EDITOR.

A Country Boy in the City, and Why He Went Back to the Farm

By T. C. Hart

Illustrations by Paul Carruth

A GREAT deal has been said and written about how to stem the tide of young country folks rushing cityward. The advantages of country life have been dwelt upon, the ever-increasing conveniences, the better schools, rural mail delivery, telephones, neighborhood clubs, and so on. Yet the flow toward the city keeps on.

The lure of the city has a powerful attraction, no matter how great the efforts put forth by the country life advocates. Being a country boy myself, and one who answered that lure, I ought to know. My kind want to know what the city holds—they want to hear and see what life is like in the big cities.

And I think that more can be gained for the cause of the country by showing what city life holds for the average country boy or girl, and then letting them decide the question for themselves, than by simply expounding the advantages of country life to them.

They know what country life is. Give them a look behind the scenes; let them see the big city as it really is, and as it would be to most of them, and then let them decide whether or not they want to leave the country and all it holds for them, for the uncertainties of the big cities.

So, to give you all a look behind the scenes of a big city, I am going to tell my own story of how I left the country for the city, and later left the city for the country.

I was born in the country not far from Chicago. From my earliest boyhood I loved the farm. During summer vacations I'd work there all I could. I've got up at four in the morning, walked four miles to work and walked home at night, and got 60 cents a day and my dinner. I've husked corn after school far into the night, by the light of the moon. I hoped to be able to go to the state agricultural college after getting through high school, and study to be a modern farmer; but my plans blew up.

At the end of my third year of high school, circumstances were such that it was up to me to go to work. Of course, I wanted to earn all the money possible, and in looking about for a job I decided that the city held out greater inducements for higher wages, and more rapid advancement, than did work on a farm.

So I went to the city and got a job as office boy for a big corporation. My salary was $5 a week, and I was promised advancement if I could "deliver the goods."

I was able to go back and forth from home to my work in the city every day. It's a good thing I was. If I'd had to live in the city on my $5 a week I'd have starved.

I'll never forget those first weeks and months as an office boy. I was green, and the way that some of my superiors "bawled me out" and "called me down" was awful. It made me want to cry from despondency. I wanted to quit it all and run back to the fresh green country and throw myself flat on the ground in my favorite woods along the old creek.

Many a noon I've sat on a stool in a crowded lunch-room eating my sandwich and glass of milk and watched the hurrying crowds bolting their food and rushing back to work or out to do a little shopping before their noon hour was up.

And how often I compared the rush and clatter and bang of the quick-lunch room with the dining-room of the old Flagg stock farm and its heavily loaded table. There the boss used to eat before the rest of us came in, and while we were eating he sat there at the head of the table and loaded up our plates as fast as they began to get empty. And then, after dinner, we'd all go out and lounge in the shade until the hour was up, and then back to work—work in the open air, out in the sunshine, out close to nature, where life was real.

What a comparison to the stools in the quick-lunch room! And what a comparison between that sandwich and glass of milk and those meals of well-cooked, wholesome food out on the farm!

But I made up my mind to make good in the city, and I refused to give up. I'd leave the lunch-room, take a short walk, and then go back to the grind in the close office of a big skyscraper, back amid the hurrying clerks, busy lawyers, banging typewriters, ringing telephones, and a general mad rush and chaos. But I gradually learned the ropes, and things got a little easier for me. In due time promotion came, and with it added responsibilities which made it necessary for me to move to the city altogether.

And it was then that I learned the awful loneliness of the city. It had not been so bad when I was going home every night, but when I had to live entirely in the city it struck me full blast. I became very homesick.

No one who has never experienced the loneliness of the big city can have any idea of what it means. To live in a building for months at a time and not know the person next door to you any better than to give him a casual "Good morning!" To go into a restaurant and eat with hundreds of other people and not know any of them well enough to even say "Hello!" To go to a theater with hundreds of others and not know a soul in the house! To ride on crowded street cars day after day—see the same faces often, and not know more than a few of them to speak to! To go to a ball game and not know anyone among the thousands present, when at home you knew all the "fans" and players, not only of your own town but for miles around! That is real loneliness.

Of course, a person makes *acquaintances* in the city—people you work with and meet in a business way, but they are usually occupied with their own affairs after working hours, they have their own "set," and it is hard for the young person from the country to "break in."

Everywhere you go—on the streets, in the stores, at the theaters, or ball game—everywhere, thousands of people, and for days and days not one you know well enough to talk to and chum with.

But once you are in the rush and roar and commotion of it all, there is a sort of fascination about it that holds you in spite of yourself. You resolve that you will give it up and go back to the country, but you stay on and on. One thing that holds you is your pride. You hate to admit that the city has beaten you. You hate to go back and face the "I-told-you-so's" of the people who predicted that you never could make good in the city.

Of course, not all people from the country want to go back after they get into the life of the city. Many of them score big successes in the cities. Some of the greatest city business men came from the country, and are proud of it.

But for every exceptional success there are thousands of failures—maybe not complete failures, but people who have got so far and no farther. They have settled into a groove.

As time went on and some small success came to me, I was promoted to the position of employment superintendent. In that position it was my duty to hire help for a number of the largest firms in the city. That way I got an insight into the living conditions of the masses of working people, and saw at first hand how a great many country people were getting along who had heard the call of the city.

Hundreds of people passed through the office daily in search of work. One of the questions asked was where they were born, and in the answer was the startling revelation of what numbers of people looking for work in the big city came originally from the country.

I found that a huge majority of these were unskilled workers. They had no trade or profession. And it was these people that it was always hardest to place. There was usually a pretty good demand for skilled workers—mechanics and office assistants—but for the unskilled the supply far exceeded the demand.

The people from the country who had studied some particular trade or line of work, and who came to the city with a definite object in view, were the ones who succeeded. Hundreds of times I have talked with people who were out of work and in need, who would say, "Oh, if I'd only been satisfied to stay at home!" That cry went up from young and old alike.

There are to-day thousands upon thousands of young people in the big cities who, rather than go back to the farm, will keep on in the city, doing the best they can, but getting deeper and deeper into the rut.

A high police official with whom I became acquainted said to me one day when we were talking about country boys and girls in the city:

"It's the damnable loneliness that gets them. They find out that life in the city isn't what they expected it would be. They get discouraged; won't admit they are beaten; try to stick it out, and in the end the life gets them. If they'd only go back, how much better off they'd be. We wouldn't have to keep up this never-ending hunt for missing girls.

I knew one young fellow who came to the city from a farm. His parents were dead, and he didn't want to stay on the farm. After about a year, during which he had done all sorts of jobs, from temporary office clerk to porter in a cheap restaurant, he came into the office one day in early spring with a look of determination in his eyes.

"I'm through," he announced. "I'm done with the fight to make something of myself in the city—there's too many of us here. I don't belong here, and I'm going back to my grandfather's farm."

He didn't have any money for car fare, but that night he "went back"—riding the blind baggage of a fast train headed out into the open country. I heard from him long after, and he had made good.

Another fellow whom the city had beaten until he was nothing but a drifter, suddenly made up his mind one morning to "cut it all out and go back." He hired out to a man who wanted men to work in the redwood forests of California. He went West, and three years later he one day appeared in my office—with his bride. He had made good, and had married the daughter of a wealthy ranchman.

One cold evening in the late fall a man that looked to be in the last stages of consumption came in to see me just before closing time. I had got work for him often, and now he came to see if I would lend him money enough to go to a little country town where he had a job waiting for him if he could get to it. I loaned him money, bought him food, and saw him on the train.

A month later he sent me what I'd loaned him, and I forgot all about him. Several years later a big, robust-looking fellow stood in the door of my office watching me with a smile on his face. He was the sick "down-and-outer" I had put on the train for the country several years before. He had made good in the country, and was the proud owner of a fruit farm in Michigan.

Personally, I had gained a measure of success in the city, but the more salary I got the heavier got my expenses. As a $25-a-week department manager I couldn't very well wear the same kind of clothes that I wore as a $5-a-week office boy. I had to dress better. My standard of living had to keep pace with my business advancement. I had to be a credit to my job. My employers expected it of me.

Where a dollar or two would give me and my "best girl" a good time in a small town, five or ten would be eaten up in the city. And there aren't many fellows who can afford to let those good times happen very often and have any of their week's pay left to put in the bank. And how different the city theaters, movies, amusement parks and dances from the socials, entertainments, picnics, husking bees, and dances of the country!

There are thousands of homes in the big cities where the head of the home has come from the country and made a so-called success. You hear them talking about getting out in the [CONTINUED ON PAGE 57]



"Because my pig became his pork"

Why He Left the Farm

Another version of the same story which beats any editorial comment we could make

"WHY did you leave the farm, my lad?
Why did you bolt and leave your dad?
Why did you beat it off to town
And turn your poor old father down?
Thinkers of platform, pulpit, press,
Are wallowing in deep distress;
They seek to know the hidden cause
Why farmer boys desert their pas.
Some say they long to get a taste
Of faster life and social waste,
And some will say the silly chumps
Mistake the suit cards for their trumps
In waging fresh and germless air
Against the smoky thoroughfare.
We're all agreed the farm's the place,
So free your mind and state your case."

"Well, Stranger, since you've been so frank,
I'll roll aside my hazy bank,
The misty cloud of theories,
And tell you where the trouble lies:
I left my dad, his farm, his plow,
Because my calf became his cow;
I left my dad—'twas wrong, of course—
Because my colt became his horse;
I left my dad to sow and reap
Because my lamb became his sheep;
I dropped my hoe and stuck my fork
Because my pig became his pork;
The garden truck that I made grow
Was his to sell but mine to hoe;
It's not the smoke in the atmosphere
Nor the taste for life that brought me here;
Please tell the platform, pulpit, press,
No fear of toil or love of dress
Is driving off the farmer lads,
But just the methods of their dads."

—*Anonymous.*



This Year's International—And How It Will Help Every Farmer

By Charles F. Curtiss

Dean of Ames Agricultural College and president of the International Live Stock Exposition

IN CONNECTION with the twentieth anniversary International Live Stock Exposition, which will be held at Chicago from the twenty-ninth of this month until the sixth of December, I have been asked to tell the readers of FARM AND FIRESIDE what the value of the exposition is to the average American farmer—in short, what it means to you.

Does it add anything to the value of your farm, or show you the way to better methods or more profits?

I should say that it most certainly does, and I will try to tell you how.

The greatest industry in the United States to-day is not the operation of the railroad, nor the operation of the great industrial plants, but the operation of the farms of the United States—the operation of your farm. The farmers do not belong to unions, do not strike for more money, less work, and shorter hours, but dig in and produce. If everyone did that we would have a lot less turmoil in this country to-day.

Hence, everything that adds to your ability to produce more profitably is valuable and worth while to you. And despite the impression in some quarters that the International is merely a fancy-stock show for fancy breeders, its primary object is to help you farmers who make up the rank and file of the greatest basic industry in the world—the food industry.

I think you will admit that anything which shows the way to improving the quality of your product is of direct value to you. We feel that the International does just that; that directly and indirectly it has been a big factor in the development of more profitable agriculture in the last twenty years.

The International connects up with you in many ways. One of the most important of these is through its stock-judging contests. The way is open for the stock of any farmer anywhere to win a grand championship at the International. No matter how modest his possessions may be, nor where he lives, he stands on a par with the biggest and the most famous, if he produces the quality stock. The International is a quality show, pure and simple. And no better example of how this works to the benefit of the individual could be cited than the Junior Stock-Judging Contest we have arranged for this year.

From the beginning the Exposition management saw the advantage of close cooperation with agricultural colleges, the farm boys' and girls' club work, agricultural extension work, and all other important lines of education, which would carry its lessons back to every community engaged in agricultural production.

The features of the International keep pace with the demands of the farm. This year the new Junior Stock-Judging Contest is open to boys and girls in agricultural high schools, clubs, and vocational schools. The representative competitors in the contest will be selected through *local* contests held in the various communities and States.

By this method the entries will be sifted down, but yet thousands of boys and girls will come to the International for the purpose of acquiring higher skill in judging live stock. Similar contests will be staged later in connection with the Grain and Hay Show.

These young people will get instruction not only in judging, but also in selection and production of better live-stock and agricultural products. In this way they will take home knowledge of live-stock and grain production which will be of great value to them and their neighbors in years to come.

Great stress is laid on the boys' and girls' end of the show. Realizing that the future of the live-stock industry, and the farm in general, rests upon the boys and girls, the International, through a number of contests, is doing its bit to make this foundation most solid.

Boys' and girls' calf, pig, and lamb clubs have sprung up all over the country. There is the greatest interest in these contests which usually are held in connection with the school and the farm bureau. During the year these clubs stage their shows when the feeding period has been finished, and the winners are picked. Sometimes the winning animals go to the state fair, and then the winners are sent to the International.

Usually the prizes at these local contests are trips to the International for the boy or girl and the calf, pig, or lamb. The expenses of this trip is the prize.

At Chicago a contest is staged, and winners picked from the stuff entered from all States. While the boys and girls are at the show they have an opportunity of entering judging contests especially arranged for them.

The last day of the Exposition the animals are sold to the packers in an auction sale for that purpose. Usually good prices are paid, and if the animal is a prize winner the boy usually takes home a nice check.

These contests teach boys and girls a number of things. It starts with the selection of the right kind of an animal, the proper feeds and balancing of the ration, keeping cost records, and finally the judging. The score of the winners at the local shows is based partially upon the cost of production, and special stress is placed upon this feature. This gets the contestants in the habit of keeping records of their business. Every minute of the time they know exactly what their calf, pig, or lamb has cost them.

This, I think, shows you the connection between the individual farmer and the International.

The International has always stood for more and better live stock, and in this way has been instrumental in the improvement and increase of other farm products. It represents the culmination of the highest achievement in agriculture.

It was just twenty years ago that it was established, and during these two decades it has constantly extended its field of service and usefulness. It serves primarily the live-stock industry, and incidentally all lines of agricultural production.

At the twentieth anniversary Exposition crop production will be represented in the International Grain and Hay Show, established through co-operation and support of the Chicago Board of Trade, which is furnishing $10,000 in cash prizes. This exhibition will be staged in the International buildings, in direct connection with the live-stock show.

Born of a necessity, the International is the leading live-stock show of the world. It is the classic of live-stock fairs, where the champions of all sections of the country meet, and the winners are picked.

Back in 1899, live-stock men decided that something must be done to further the production of more and better live stock. Meat production had not kept pace with the growth of the population, and the growth of better stock was lagging.

On November 24, 1899, a group of prominent live-stock men and representatives of the various breed associations gathered in Chicago and, after discussing the proposition, laid the plans for the International Live Stock Exposition.

In the twenty years of the Exposition it has yet to reach the climax of its growth, and it probably never will, for pure-bred and better live stock is continually increasing. The scrub is going; better live stock is becoming more numerous every day.

The mission of the International, as decided by these men, is evident on every farm in the United States. Thousands of farmers attend the International each year, and have profited by the lessons the show teaches. The great purpose and central thought of the Exposition has been its direct practical educational value, and the better methods of more profitable production of live stock.

Having accomplished what it set out to do, the next logical and important step for the International is increased production of better qualitied grain. The Grain and Hay Show, we believe, is the right step in this direction.

The International is not a show for the breeders alone; it is an exposition for the feeder and producer as well. The car-lot division of the show, with its various contests and sectional classification of entries, affords lessons which personal or individual experience could never produce.

In this department the best feeders and producers of the country exhibit their wares, pitting their favorite rations and methods of management against those of other experts. The Short-Fed Specials open a fund of real practical information to the feeder.

The cattle in this department are judged according to quality, finish, cost of gains, and dressing percentage—everything a successful feeder must know in his daily work. Various rations and feeds are tested, and the results are made public. The results come to the interested farmer in dollars and cents, so that he may know what feed or combination of feeds will produce the quickest and cheapest gains.

And the exhibitors make known the cost of the feeders, too, and where they came from. The selling price, then, shows a man what margin over the first cost he must have to feed certain rations. The results show how feeds can be handled profitably.

The judging in this department is done by packer buyers; in fact, all of the cattle, hogs, and sheep in the car-lot division is placed by men who buy from the farmer every day the stock he ships to market. To see the winners they pick shows what the packer needs, and what he will pay best prices for.

The practical feeder's opportunity to gather the packer's viewpoint in his production methods is not limited to the results of the car-lot division. There is a judging contest in connection with the Slaughter Tests which gives any man a chance to pick the steer he thinks will dress out the highest percentage of beef.

The award in this contest—that is, the winning carcass—is not judged solely on dressing percentage, but the quality of meat, and the covering over the various parts of the body. Therein lies the advantage of this contest to the feeder: he can learn to judge quality in live animals, and use it when he buys feeder cattle.

In closing I might say there was never before in the history of America such a large output of agricultural products and of such high all-round excellence as was produced under the stress and strain of war conditions in 1918. This output promises to be duplicated, and even surpassed, in 1919, and the best of these products will come in friendly rivalry and competition at the International this year.

Therefore, if there is any message that I, as president of the International, have for you, as an American farmer, it is this:

Keep your eye on the International show, and on the other shows—state, county, and local—which lead up to it. It has many things of value to offer you. Attend it, if you can, in person. I urge this not because I want to swell the attendance, nor for any selfish reason whatsoever, but because I believe the International, with its keynote of quality—which in turn is the keynote of successful farming—is really a valuable and worthwhile thing to you.



THIS is Dean Charles F. Curtiss, president of the International Live Stock Exposition and dean of the Agricultural College of the Iowa State College at Ames. Dean Curtiss also is a famous breeder of Percheron horses, Shorthorn cattle, and Berkshire hogs. He has been connected with the International since its inception, and is one of the best informed men on live stock and general agriculture in the country, and is recognized as one of the leaders.

One of his greatest works is the two-year agricultural course at Iowa State College. This course can be taken by farm boys who have not had the opportunity of going to high school. Up to the time he hit upon this idea the agricultural college was limited to those who went through high school; but now any boy having a grammar-school education can take the short course. The course is not the same as the regular four-year course, but it contains all the essential studies for a practical farmer.

Dean Curtiss some years ago went to South America in the interest of Shorthorn cattle, and the impression he made on the Latin breeders is partly responsible for the wonderful growth of Shorthorn prestige in those countries. During the war he was one of Mr. Hoover's advisers. He is also a director of the Iowa State Fair, having charge of the horse department, and president of the Berkshire Breeders' Association.

Pruning to Prevent Injury

By R. G. Kirby (Michigan)

SOME of our Michigan peach orchards, and apple orchards as well, exposed to the full force of violent winds are injured in appearance and productiveness, particularly the rows of trees bordering the orchards.

I find this trouble can be largely overcome by pruning the young trees, and also when setting the trees if a slight incline is given toward the prevailing wind.

Branches growing toward the strong winds should not be pruned so heavily, which helps to keep the center of gravity on the windward side and the trees better balanced.

Peach wood is more brittle than apple wood, so to prevent breakage when heavily loaded with fruit I avoid all crotches in pruning the branches that must take the brunt of the wind, and thereby save much injury to the trees and loss of fruit as well.

What Does Your Wife Do to Help You Succeed on the Farm

By Andrew S. Wing

NOTE: This article is built around the idea that it is a good investment for a man to look upon his wife as a business partner, and give her a real share and an equal division of responsibility with him. The facts here certainly prove the value of that point, and there are enough farming folks north, south, east, and west who, *not* getting as much as they might out of the farm business, would be greatly interested in an article that puts the proposition up to them in a constructive way. THE EDITOR.

BEFORE me, as I write, is a letter from a farmer's wife asking: "How can I help my husband in his business? In what ways can I be more useful outside of my regular housework? What part of our affairs should I manage, and how should the division be made?"

With that is another letter, from another farmer's wife, who complains that, in spite of helping her husband in the field in addition to doing the housework, they don't seem to be progressing very rapidly.

I'm going to answer both these letters by telling you the actual experience of three million farm women who had to answer the same questions for themselves. It may bring out facts of interest and value to all the husbands and wives who read this. I will give you the facts, and let you judge for yourself.

These three million women live in the South. Up until nine years ago they worked harder and produced less than any other group of women in the country. They didn't know what the trouble was. Their husbands didn't know, either. Within the last nine years, by studying out this very problem of the wife's place in farming, they have made themselves healthier, happier, and richer than they ever were before.

In 1918 alone, those women added products worth $65,000,000 to Southern commerce, sold 16,000,000 pounds of butter at an average of 17 cents above market price, and produced and marketed $300,000 worth of eggs.

How was this change brought about? Simply by a careful study of the farm wife's most productive place in her husband's business. The study was made by Dr. Seman A. Knapp, his son Bradford Knapp, and a corps of Department of Agriculture home demonstration agents working in co-operation with the farmers' wives and daughters.

Bradford Knapp is now chief of the Office of Extension Work in the South. In telling me the facts of this wonderful story (which I believe has a real message for every husband and wife in the farming business), he went back to its beginning in 1910, when his father started, independently of the Department of Agriculture, with three county agents in Virginia and North Carolina, and followed the spread and development of the movement down to to-day, which finds the entire South covered with a chain of local women's clubs. These clubs are really what has made the whole thing possible. The Knapps and their agents merely put the facts before the farmers and their wives and pointed the way, and the farm folks did the rest.

The first step in 1910 was the organization, in connection with the county-agent work with farmers, of girls' tomato clubs and canning contests. While these created a great deal of interest and pointed out the possibilities, they were necessarily very limited in their scope. Soon afterward the work was taken over by the Department of Agriculture, and plans were made to carry it on in a very extensive way.

The younger Knapp had been studying the problem of the Southern farm woman for a number of years, and there were some things that greatly puzzled him. In the first place, the 1910 census showed that 85 per cent of all women engaged in agriculture in the United States were in the fifteen Southern States. He finally discovered that the reason for this rather startling proportion, which seems grossly inaccurate at first, was that the women of the South were listed as being in agriculture to a greater extent than the women of the North and West, because more of them *actually got out in the fields and worked with their hands*, while Northern women spent most of their spare time with their poultry, butter, and gardens.

The work done by the women of the North and West was not considered as agricultural, although they were actually producing much more than the Southern women who worked with a hoe in the cotton fields. This was an enlightening though rather a discouraging discovery, but it seemed to point a way to a solution of the problem.

Why did so many Southern women work in the fields when a great deal more could be produced, and with less labor, by their attending to the things that come more naturally within a woman's sphere? The answer was that they didn't know how.

"How many farmers' wives are there here who have any income of their own, that they earn through work they do at home, such as raising chickens, making butter, or gardening?".

A deep silence fell over the room. One woman after another dropped her head and tears began to flow. At last one elderly woman rose and said:

"Mr. Knapp, you have hit the nail on the head. That is the very thing that is the matter with us, only we have been afraid to say so, and don't know how to help it. All the work most of us do on the farm goes into the corn, or cotton, or tobacco crop, and we don't have any money of our own. If you and your people can show us how we can make some real money for ourselves, it will be the greatest thing in the world for us."



Girls' club workers canning fish along Chesapeake Bay

Prize Contest Announcement

How My Wife Has Helped Me in My Business

IF YOUR wife has helped you make a success of farming, tell us in a letter of not more than 500 words how she did it. If yours is the best letter received we will send you the first prize—a check for $15. If it is the second best, we will send you the second prize—a check for $10. If it is third, we will send you the third prize—a check for $5. And if it is among those we print we will give you a $3 prize check for it. The page of prize letters will appear in a later issue of the magazine. The contest closes November 25th, so get your letter in before then. We can't promise to return unused letters unless stamps are enclosed for it. Address Contest Editor, FARM AND FIRESIDE, 381 Fourth Avenue, New York City. Many a man's wife has done a heap to help make him a success, and we expect some wonderful letters from you in this contest.

THE EDITOR.

Investigation showed that there was very little butter marketed from Southern farms. Scarcely any poultry or eggs were sold, and there were very few gardens that really produced anything. Canning vegetables and fruits, as well as curing meats, had become a lost art. It is much more difficult to keep canned goods in the South than in cooler climates, and as a result this very important home industry had practically passed out of existence because the women had never learned how to do it properly.

Of course, there were a great many exceptions where Southern farmers' wives were just as proficient, or more so, in all the little tricks of providing a good larder, and at the same time adding to the family income, as anyone could be. But they were exceptions, and the average wife of the small farmer was pitifully in need of instruction that would show her the way to do more toward increasing the farm income, and by doing much less hard work.

Shortly after the work began, with these facts to guide it, a meeting of farm women was held in a small Virginia town, and Knapp was asked to address them. He had about made up his mind what the trouble was, so the first thing he did was to ask them this question:

That was the second and the real beginning of the work as it is now carried on. Trained experts were sent out to show how to can vegetables and fruits. Canning clubs were organized and steam canners were made at home.

It was impressed on every worker that she must show the women how they could start with nothing and build the things they needed to work with. Gardening was encouraged, and tomato and various other clubs were formed among the girls, where they were taught and inspired to help produce things. Meat-curing demonstrations were held, and this art was revived, for the far-famed "sugar-cured hams" had really become more of a myth than a reality in most sections. One of the workers became so enthused over this phase of the work that he wrote a book on the subject that went clear back to the days of Pharaoh. They were taught how to preserve beef, hams, fish, and even chickens, and found the women everywhere eager to learn.

The big result of this campaign is that while fewer women are now found in the fields with the men, a great deal more is added to the family income through the women's efforts in kitchen, poultry pen, and orchard.

Many families which relied almost entirely on one or two main crops for their income have found that the by-products which the wife produces do a great deal toward providing a living, and, furthermore, she has money of her own with which to buy her frocks and the things she needs to make the home more comfortable and attractive.

In many cases the farmer's wife is able almost to support the family with the money thus earned.

This would seem to show rather clearly what the farm wife's most productive place is in her husband's business.

The organization has had to keep pace with the demand for its services, and so where there were 21 workers in 1911, there are now 1,172, including state leaders, district agents, local and emergency workers. Of these, 314 are colored, although practically all do work with negro women.

There are now altogether 6,391 clubs, in the South alone, for women and girls, of which 3,525 are composed of negro members. Although the total club membership is only 325,229, the number of girls and women who were directly helped through this work was over 3,000,000 in 1918. This does not include those who are only reached through bulletins or letters; every one of them received some sort of personal aid or demonstration.

The idea is started in a community through a demonstration, after which a club is organized. As soon as the community gets the idea other clubs are formed, and then all are linked together as a part of the county agricultural society, which naturally is welded into the state and national organization.

But what has this work been able to do toward increasing the farm income? Insignificant as the by-products produced by the feminine end of the family may seem, the total for 1918 amounted to more than $65,000,000. And each dollar means better living conditions, better education, better clothes, and more of the proper sort of recreation for Southern farm families. But the greatest of all is the boost in self-esteem when the better half knows that she has materially contributed to the support of the family, and that she has a little pin-money of her own to spend for long-needed household improvements, or to put into the savings account. Perhaps she still helps in the cotton field during the busy season, but most of her time she spends with things that come within her own jurisdiction, and which pay far greater dividends on the labor expended.

Statistics are usually a bore to anyone, but when they represent what they do in this case I believe that you will be interested in hearing a little more of what the women of the South produced in 1918. The total value of the food preserved, including vegetables, fruits, and meats which were canned, dried, and brined, was $17,852,353. The number of pounds of butter made under home demonstration methods was 16,507,711. The number of chickens raised was 1,592,357, and the number of eggs sold co-operatively was 575,593. One of the greatest things is the number of rest-rooms established for farm women, which is 137, while there were 855 community canneries established. The men will indeed have to keep on the job to stay abreast of what the women's clubs are doing.

In the spring of 1917 a farmer of Durant, Oklahoma, had decided that to keep on farming his 40 acres would be worse than folly. The mortgage and interest of $1,021 seemed to be more than the place was worth as a farming proposition, and he had about determined to let the bank foreclose on it. His wife and daughter had other plans, however, and did not intend to give up their dream of having a home of their own. They got the head of the family to agree to deed them the place if they could make a go of it. He agreed, and they started their plans for clearing the place of debt.

They hired the 40 acres plowed, and planted cotton and [CONTINUED ON PAGE 52]

Six Big Points to Study When You Buy or Sell a Farm

By E. L. D. Seymour

WHAT should you know about your farm, anyway? How would you size up the ten most important facts about it if, as owner, you were thinking of selling it, or if, as customer, you were thinking of buying it?

That was the question that buzzed in my head the year I completed the course at Cornell to top off my practical experience previously accumulated back home. So I wrote to about a dozen leading agricultural authorities in different parts of the country for their advice.

Someone has said that there is neither reason, safety, nor profit in attempting to advise a man as to the choice of a farm, a horse, or a wife. Well, I don't know. The replies I received were so all-fired helpful and so much to the point that when I came across the correspondence the other day it suddenly struck me they might be of interest and possibly of help to other farmers, so I am passing them along to you, boiled down into a summary of "Things That Every Farm Buyer Should Know." That is, I boiled down all but the reply of "Alfalfa Joe" Wing—which included some of the points on which all the others agreed, and also was so human and helpful and real that I have let it stand just as it came to me.

Doubtless many of you who read this know most, if not all, of the men quoted. There was Prof. G. F. Warren of Cornell, whose farm management studies are among the best ever made; there was Dr. W. M. Jardine, now president of the Kansas Agricultural College; there was Dr. W. J. Spillman, long-time chief of the Office of Farm Management of the Department of Agriculture; Dean F. B. Mumford of the College of Agriculture of the University of Missouri; W. L. Nelson, then assistant secretary of the Board of Agriculture of that State, now a congressman, but always a sound, practical, clear-visioned farmer; Statistician C. J. Blanchard of the U. S. Reclamation Service, who knows irrigation farming problems backwards; Schuyler Marshall, successful rancher of Texas; George T. Powell, New York fruit grower and president of the Agricultural Exports Association; and Joseph E. Wing of Ohio.

It so happens that just six main points were mentioned in every one of the ten replies, and six others were included in one form or another in all but two or three. These I propose to set down, briefly, first; then I am going to pass along Mr. Wing's interpretations and explanations of some of them.

The Six Big Points

1. THE SOIL. Prominent in every answer was some form of the composite question: What is the soil like; what is its texture; is it fertile, sour, stony; and how has it been handled by previous farmers? Associated with this are such supplementary points as: Is it well drained, naturally or artificially? To what crops is it especially adapted? What have been its per-acre yields of important crops? With the arid West in mind, Mr. Blanchard naturally urges careful inquiry regarding the supply of this irrigation water, its nature, certainty, and cost. But probably the keynote of this whole question is struck by Mr. Marshall of Texas, when he says:

"I would also go to the land and examine the soil myself, taking no man's word for that." There, indeed, speaks wisdom and experience.

2. SIZE AND ARRANGEMENT. A second question compounded of several parts has to do with the size of the farm and the arrangement of its fields. By this is meant both the total acreage paid for and the actual acreage of arable land from which the returns must come. As Professor Warren puts it:

"Very frequently land that sounds cheap is actually very expensive when viewed in the light of its tillable area. Wood and pasture land is usually not very valuable." In other words, if you buy 100 acres for $5,000 and 75 acres turn out rough, scrubby, or otherwise unproductive, you might as well consider the property as consisting of 25 acres which must pay interest on a valuation of $200 an acre, instead of the $50 per acre you paid, presumably, for the whole farm. Another adviser cautions:

"See that the sum of the different kinds of land—pasture, woodland, tilled fields, house lot, etc.—equals and does not exceed the figure given for the whole farm. Be watchful for a possible duplication of wood lot and permanent pasture."

The arrangement of the fields is sometimes obviously good or poor. But more often a farmer gets so used to going the longest way round, or to avoiding a wet swale or a pile of rocks, or to tilling half a dozen little fields that might be better thrown into one, that he loses sight of the inconvenience to which he is being subjected, and the time and money he is wasting. Study the farm to see not only how it is arranged, but also how it can be rearranged.



YOU can see as well as we can what Seymour is doing here, so we won't bore you with details. You might be interested, however, to know that he lives at Hempstead, Long Island, that he's a New Englander by birth, and has been a practical farmer all his life. He has also written several farming books out of his own experiences. He's modest, and didn't want his picture printed. His wife loaned us this snapshot as a very special favor. But don't tell Seymour.

THE EDITOR.

3. TOPOGRAPHY. The lay of the land has special significance in these days of machine farming and power equipment. Is it level so as to permit the use of such machinery, or is it rolling, hilly, or cut by gullies or ledges? Is it easy to cultivate, or is there danger of soil erosion taking place, together with its numerous attendant losses? And, as Dr. Jardine notes, is the air drainage good, especially in the case of the farm that is sought for the growing of fruit?

4. WATER SUPPLY. Quite aside from the problem of water for crops, whether from heaven or from irrigation ditch, is there an adequate, unfailing, conveniently located supply of pure drinking water? Offhand one is likely to scoff at the possibility of overlooking such an important feature, yet upon how many farms are man and beast dependent upon a single shallow well or a few casual springs so poorly located that every gallon of water used has to be "toted" at an almost inconceivable cost in the aggregate of both time (which means money) and human effort and comfort!

5. BUILDINGS. Closely related to the water supply are the buildings and other improvements that measure the livableness of the farm. Here, of course, there is room for considerable latitude, but the range of the questions to be asked under this head is well expressed by Dr. Spillman's query:

"What kind of improvements are there on the place, and are they adapted to the purposes of the buyer?" Then he adds: "A farmer can afford to build a dwelling which costs an amount about equal to the annual income of the farm, and he can afford other buildings costing in all about the same as his dwelling."

Representative Nelson also contributes a significant thought when he says:

"Are the improvements old or insufficient, or out of proportion to the true value of the farm, and so extensive as to prove burdensome?" There is a state of being "building poor" which is just as undesirable as that of being "land poor."

6. WHAT OF THE FARM'S ENVIRONMENT AND COMMUNITY? This, the last of the most essential questions to ask about a farm, includes roads and railway facilities, the geographical location and its characteristics, such as climate, and, of prime importance, the people of the community. Take any one of these factors you like and you will find that it affects the value of the farm in three different ways. The first deals with the economic side of farm management—the marketing of its products, the obtaining of supplies and of labor, the cost of production, etc., not to mention the effects (of climate, for instance) upon every detail of the actual crop and animal production. The second determines the social life and status of the farmer and his family—first in relation to schools, churches, stores, mail and telephone facilities, granges and other means of human intercourse; and, second, in respect to the character and desirability of the people themselves as neighbors, friends, and co-workers. The third group of effects bears upon the actual life of the man, woman, and child on the farm, since climate, the intellectual development of the neighborhood, and the ideals and habits of its people all contribute directly to the maintenance or destruction of health and, through that channel, to the very foundation stones of happy, useful existence.

In seeking answers to this group of questions in particular, no little tact and persistence are required. It is not enough, for instance, to find out that the average annual rainfall for the section is forty inches; the important thing is, how much of that rainfall comes during the growing months when it is needed, and how much in the form of torrential, largely wasted spring or winter storms?

Again, as to location, the town two miles distant may be far less accessible than one six miles from another farm, if the former has to be reached over muddy, rut-carved, uncared-for roads or by crossing an insecure bridge over a stream frequently subject to floods, while the latter is reached via hard-surfaced highways and easy grades. In every case, reads the advice contained in the letters that I have before me, ascertain not what *sometimes* occurs, but that which can be confidently expected eight years out of ten, and also that which is likely to happen during the bad years that are bound to come once in a while.

Taking up now questions that are included in a majority but not all of my letters, I have made up a second list of the almost-as-essential factors—not a second choice list, be it remembered, but rather a reserve supply of worth-while inquiries. There are:

1. What are the price and the actual value of the farm, the latter as shown by its assessed valuation and its tax rate? What are the constant, overhead expenses, such as the taxes, insurance, repairs, etc., that must always be deducted from its gross income before its real producing ability is found? In this connection one of my authorities says, "This [insurance] is the best criterion of the present worth of any farm building. Take the total insurance as the present worth to the owner." And Professor Warren adds: "It is usually better to offer cash for a farm, if possible, and borrow of a bank, rather than give the former owner a mortgage, as the price will usually be reduced for all cash. Banks commonly lend about half of the value of a farm."

2. What sort of farming are the neighbors practicing, and what results are they obtaining? "It is not often wise," says Professor Warren, "to undertake a type of farming that is not already developed in the community. Certainly, a beginner ought not to start such a type." And Nelson brings up another important point when he asks: "If specialized farming, such as dairying or fruit-growing, is your aim, are there local associations through which your produce may be marketed?"

3. What are the banking facilities in the community? Once upon a time that would have cut but little ice, to use a common phrase, but to-day the farmer must be a business man in fact as well as in name. He must know how to use and handle money; and the securing of financial aid from a safe, convenient source, on favorable terms, is often an essential and legitimate phase of the farming business.

4. What is the history of the farm? Has it been mined or carefully, intelligently farmed? Is the soil gaining or losing in fertility, and why? How much stock are the fields carrying; how much have they carried in the past; how much are they capable of carrying? "If the farm does not have the equivalent of one cow or horse for each five acres of crops," warns Professor Warren, "it has not been getting very much manure."

5. What have been the actual cash receipts obtained for each of several years, and what are the average yields of wheat, corn, and other leading crops for a period of not less than ten years?

6. How does the farm measure up to your personal tastes, fitness, and equipment for agricultural work? In other words, are you fitted to run that kind of farm? This, perhaps, is hardly a question directed at the farm property, but more than one of the men to whom I wrote deemed it of sufficient importance to warrant their voluntarily including it.

7. Have you sufficient capital to buy, stock, equip, and maintain the farm for two, three, or more years until you get it on a paying basis? Talk to your local banker on this. Is your family going to enjoy living here, and going to benefit by it? Frank answers to such questions are valuable before a decision to buy is made. Now, as to why some of these factors are so important, let me quote from the letter from Joseph E. Wing:

"First—Where is the farm located? Each region has its especial adaptation to crops. One can switch these around more or less, for I have seen apples grown in Louisiana and figs in Ohio, yet it would be folly for me, wishing to grow apples, to buy land in Louisiana, or, wishing to grow figs, to buy land in Ohio. In Vermont grow maple sugar, grasses, cows, and sheep, yes, and pine trees. In Ohio grow oaks, maize, wheat, clovers, and alfalfa when men know how. If I hate to milk cows, I should not buy a dairy farm; if I love the tinkle of the sheep bell, I must [CONTINUED ON PAGE 30]

The Horse Situation—And What You and I Can Do About It

By D. J. Thomas

ON MY way up the horse line to the auction ring in Chicago the other day, I asked a friend of mine who is a horse dealer how the market was acting. He is one of the big operators, and handles thousands of horses in the course of a year.

"Good horses are selling," he said, "but it is hard to move this stuff below 1,500 pounds. The common stuff won't even get a bid. No one seems to want anything but draft horses weighing 1,500 to 1,600 pounds and over."

I left him and went into the auction ring. Here I saw good horses, the kind city operators would have welcomed a chance to buy a few years ago, selling at $125 a head. These animals, sound five-year-old geldings and mares weighing 1,400 pounds, were a drug on the market. A few horses of about 1,000 to 1,200 pounds were run in, and went under the hammer at $75 to $100.

I believe there is something for all of us farmers to think about in the present poor condition of the horse market. I have looked into the thing and I'm convinced that during the next five years you and I have got to look pretty carefully to our colt crop, and not depend on anyone else to do it for us.

The market is off now, due largely to the ceasing of the demand for light stuff, which was wanted during the war. All stuff under 1,500 pounds, regardless of quality, is in this class. A shortage is bound to come during the next sixty months, possibly within the next thirty-six months, because of the small colt crop and the general lack of interest in horses. I think you and I as farmers should fully realize this and act accordingly.

Both to use and to sell, I believe the best colt we can breed is from a mare weighing a minimum of 1,400 to a stallion above the 2,000-pound mark. I know of several men who are doing this successfully. I figure that every 100 pounds a horse carries over 1,400 pounds now is worth $25 to me. Work for the light horse is better done by power, and the heavy animal is coming into its own, both on the farm and in city hauling over short distances, where power doesn't pay.

I had known that the market for the last six months was merely a market in name; in fact, during the last five years, except at times, it has been the foreign army demand that kept the horse market on its feet. And conditions on the market reflect the situation in the country.

Light and medium weight animals were easy to sell if they passed the army tests, for the artillery and cavalry could use them. This selfsame stuff now is hard to sell.

Everyone has plenty of farm horses now—in fact, there is more than enough to go around. The market is in poor shape, and buyers no longer roam the country buying carloads from communities. Every now and then a buyer drops around, but he only skims the best drafters, leaving the others.

I have had men tell me that suckling colts, in their locality, regardless of good breeding, could be bought for as low as $25—and it takes this amount to pay the service fee for a good stallion. In view of this, is there any wonder that horse production is decreasing, and that a shortage looms on the horizon?

I have also been told that in some sections the colt crop this year is but half of what it used to be, and there is a big possibility that it will be smaller next year, unless farmers can work off some of their horses at a good price. When I asked one farmer the reason, his reply was:

"I can make more money raising a calf than a colt."

The high price of feed has made horse production prohibitive, considering the price of the horse after it reaches maturity. Another thing, to raise colts pasture is necessary, and with wheat at $2.26, corn $1.50, and oats at 70 cents the farmer is anxious to work all of his arable land while high prices prevail. He wants to harvest the hay while the sun is shining.

To rent pasture is almost an impossibility, unless the land is unfit for the plow—and then it can be had for about $10 an acre. Witness what Western cattlemen are paying for pasture—$50 per head in some instances. Pasture land has been slashed right and left in the last two years in the rush to get in as much grain as possible.

Not only must a colt have pasture, but it must also have a liberal ration of grain to produce good growth. Farmers say they can't feed a colt corn and oats when the same grain, fed to a steer, will produce more money, and in a shorter time.

This shortage has already arrived in one locality—Montgomery County, eastern Missouri. W. J. Bishop, a big farmer in that section, told me of it.

"There is a scarcity of work horses and mules in our locality," he said. "We raise only enough colts to supply our needs; and the war demand took all our surplus, and a little of the stuff which we could not well afford to part with.

"We use more mules than horses, but they, too, if you will remember, were in good demand, and were bringing more money than horses. High prices proved too tempting, so we are short of horses and mules now.

"We will have to buy now, until the crop of colts on hand can be matured and broken to work."

A horseless farm is an impossibility at the present time; even the tractor men will agree to this. The tractor, however, has reduced the horsepower requirements as much as one half on some farms, with an average of about one third. This leaves the tractor owners with excess horses.

The auto truck in the city has done away with the demand for the 1,000- to 1,400-pound horse, which used to be so popular for light hauling and express work. The auto now does this hauling, and the number of light delivery trucks is constantly increasing. Any merchant who has any delivering at all has a small truck.

This is the principal reason why the horses which scale below the draft mark find it hard sledding. About the only outlet, as I see now, for this kind of animals is the Southern farmer, and he is pretty well stocked up. Incidentally, this demand is only at times, and the number of horses required for replacements is considerably smaller than the supply. The mule, too, is hurting this business—in fact, the mule is making serious inroads in all work which heretofore has been allotted to horses alone.

In the city the draft horse still retains his hold on the short-haul work. Big teaming contractors who have scores of trucks of all sizes still use horses on short trips, where heavy loads are drawn. They say the horse can do this work better than a truck, but they look at it in a different way on long hauls.

From this it would appear that the future horse market will be for draft horses. Harry McNair of Chicago, one of the biggest horse dealers in the country, says this is true.

"It is a hard market for anything below 1,500 pounds," he said. "The horse trade is not what it used to be, because of the curtailed use of horseflesh in the city and on the farm. Better roads in the city and country invite the automobile.

"The man who has light mares now can provide for the future by breeding them to big draft stallions. The kind weighing over a ton will produce a colt which will scale 150 to 200 pounds more than the mare, and put the colt in a position to supply the demand.

"And, in addition to finding demand, the price will be from $50 to $75 more. Right now every 100 pounds a horse carries over the 1,400-pound mark is worth $25 to the farmer. This is a fact."

McNair speaks of breeding mares weighing 1,400 pounds or under to stallions above the 2,000-pound mark, or thereabouts. I know of one man, H. W. Gossard, who began an experiment of this kind eight years ago. He started with ordinary range mares on his ranch out West, and the first cross of the mares and a 1,900-pound stallion gave colts weighing 200 pounds more than the mare. He rebred the offspring to another draft sire, and the present product bids fair to scale 1,600 pounds or better at maturity.

Any farmer can do this, and thus utilize the stock he has on hand. Experiments have shown that the heavy horse is coming into his own on the farm as well as in the city. There are lots of farms too small for tractors, others too rough, and some have grades which a tractor does not negotiate very readily and last long. It costs no more to maintain draft horses, and they will do more work than the lighter kind.

Just the other day I was talking to Hugh Davis, a farmer of Washington County, out in southeastern Iowa. He was extremely interested in the horse situation and he also told me there will be a shortage of horses in a few years.

The talk I had with him was typical of what other thinking farmers had to say.

"There is no money in raising horses at the present time," he said. "It will pay a man more to raise a calf than a colt, for he has some chance to get money for his calf. Horses are not paying enough to raise them any more.

"If high-priced feed continues it will tend further to reduce breeding, and in the next four or five years there will be a big shortage of horses. Then everyone will wake up and realize the mistake he has made. Of course, the tractor has reduced the number of horses required on some farms, but not every farm has a tractor, and all will not have, because some land is unsuited to them.

"Then, again, no matter how good the tractor, horses will be needed. No machine has been designed as yet which will eliminate horses altogether. If we have a shortage, horses will sell way out of sight.

"And I hate to see things going the way they are now. In our locality in the last few years farmers have been buying mares of good breeding with the intention of getting a better class of colts. However, some of them have stopped breeding.

"You can buy, in our section, a suckling colt for $20 to $40. There is no money in this for the farmer, especially when he pays $20 to $25 for service to a good stallion. A calf, on the other hand, doesn't need to be fed so long, and can be carried along on cheaper food. In a year the calf is ready for market, and has a good cash value.

"If conditions continue as they are, the fellow with a long head who continues to produce colts will come out at the big end of the horn in a few years, for he will have horses and there will be a good market at fine prices."

Roy J. Swaner of Henry County, western Illinois, in addition to feeding live stock, handles a few horses. He says he can buy a 1,600-pound horse in his section, that is sound in every respect, and of fine quality, for $200. He bought some recently, and resold them on the market at Chicago at a profit of $25 per head. He won't, however, touch horses weighing 1,200 to 1,400 pounds, because he can't get rid of them.

I talked with better than one hundred farmers, but the men I quote here cover about what the rest told me. It seems as though few think of the impending shortage. They don't seem to realize it, because they haven't given it the necessary thought.



This is Abe Klein, a Chicago trader, with a sample of the wrong kind of horse to breed now. If this animal were blocked up with 100 or 200 pounds more, it would command $50 more on the market

Don't Worry

THE horse market isn't going to pieces; it is merely readjusting itself. Prices are way down now because the right weight stuff isn't being offered. There probably never will be an extensive market for horses under 1,400 pounds. There will be plenty of demand for heavier stuff. THE EDITOR.



Here is George Abrams of South Bend, Indiana, driving a team of about the right weight to make it desirable anywhere

How 8,500 Fruit Growers Are Cutting Out the Middleman's Profit

By John B. Wallace

WOULD it mean anything to you in these days when the cost of living has soared so high if I were to show you a way to save from 5 to 25 per cent upon every necessity and every luxury that you buy?

Would you like to be able to buy the barrels, crates, and boxes in which you ship your produce at practically the same prices that you paid twelve years ago?

Would you like to be able to buy your spraying, your fumigation materials, your fertilizer at pre-war prices, plus only the additional expense caused by higher labor and transportation costs, without one cent of tribute to the profiteer?

Would it mean anything to you to be able to sell your produce in the open market at the very highest price obtainable, without one cent of the proceeds being withheld from you except the actual cost of getting the stuff to market?

These things are actually being done by me and my fellow citrus fruit growers of southern California to-day. There is no mystery about it. We are men just like you and your neighbors—and we learned to pull together. That is all.

The California Fruit Growers' Exchange, perhaps the greatest co-operative marketing vehicle in the world, is too well known to merit a detailed description. It picks, packs, and markets more than 70 per cent of the oranges and lemons grown in California. Through it the grower is assured of selling his fruit and produce at the top of the market. Such a high standard of excellence has been maintained for the fruit put out under its brands that its trade-mark, "Sunkist," is valued at a cool million dollars.

But there is another end to the game besides the selling end—the buying end. And so we organized the Fruit Growers' Supply Company, a subsidiary company of the California Fruit Growers' Exchange, in October, 1907. The two corporations are independent of each other in operation, but very closely connected, both having the same stockholders and many of the same directors.

It began with two employees. To-day it has an office force in Los Angeles alone of 25, and has on its official pay roll more than 425. Last year, an off year because of a short orange crop, it did a $4,000,000 business. The previous year, 1917, which gives a better basis of comparison, as the crop was normal, the supply company bought $5,759,080.53 worth of merchandise for its members.

The company will buy anything a member desires. If I wish to build, it will buy the lumber, the nails, the plumbing, the paint. It will buy my farm or orchard machinery, my tractor or my pumping plant, for me. It has bought articles ranging in value from 50 cents to $25,000.

Recently one of the local exchanges called upon Secretary A. E. Barnes to buy a baptismal font for a Baptist church. Barnes not only bought it, but also saved $17 on the purchase.

Take my own experience: Last fall a wagon wheel went to pieces on us. I inquired the price of a new one from the nearest retail dealer. He quoted me $27. I bought it through the supply company for $17. In December I purchased an electric carpet sweeper of a well-known make, which retails for $53.50, through the supply company for $41.80. These are only *initial* savings. There is still a further refund due at the close of the fiscal year.

On many articles there is not such a large saving on first cost, as manufacturers' agencies compel the supply company to charge very nearly the list price, to protect their own dealers. But the saving is made just the same. The supply company simply banks its profits and distributes them to us growers in refunds at the end of the year. The refund last year amounted to the tidy sum of $134,872.07.

Through its immense purchasing power, which represents the combined resources of 8,500 growers, the company is able to establish connections direct with manufacturers or their agencies, thus getting prices that eliminate entirely the profits of the jobber and retailer.

The method on the part of the purchaser is simple: I call up my local packing house through which I ship my fruit and describe the article I want. They, in turn, phone or mail my order to the main office of the supply company in Los Angeles. The company procures the article from the nearest agency of the manufacturer, and has it shipped to me. Several weeks later I get the bill.

I can either pay the cash to my local packing house or they will debit it against my account.

The supply company is often able to save me money by acting in an advisory capacity, as it is well informed as to the merits of different makes of the same article.

The sundry department of the company is just in its infancy. Many of the growers do not yet understand and take advantage of the wonderful opportunities for saving that it offers them. But at that this department did a business last year of $131,753.27. One of the popular lines that it supplies is automobile accessories, especially tires. Large savings are effected by buying through the supply company.

Take fertilizer. The fertilizer bill is one of the largest that a grower must meet. Last year the company bought nearly $500,000 worth of fertilizer for its members. The bulk of this was commercial fertilizers. Through their contracts with the big meat-packing companies the company was able to effect a considerable saving to its members on such materials as blood, bone, and tankage. The supply company also buys large amounts of fish scraps from the canneries, as well as great quantities of lime rock and refuse lime from the beet sugar factories. Not only does the company make a considerable saving, but it also insures a supply. This was a great boon during the past two years, when fertilizers were very hard to get.

Each year the company makes a survey of the possible needs of its members. Much of the fertilizer is then bought out-right, and stored in company warehouses throughout the Citrus Belt. All I need to do is to place my order with my local packing house and it takes care of me.

But it is in the line of stable manure that the company has proved of inestimable benefit to the growers. This commodity is yearly decreasing. The automobile, the truck, and the tractor are slowly but surely driving it out.

From Los Angeles, where four years ago the fruit growers and truck farmers were able to get 25 cars of barnyard a week, they now get a scant seven. Other coast cities show a similar decrease. This season the company had more orders than it could fill, and was compelled to pro-rate the supply. With the supply company out of the field this would have been a bonanza for the speculator.

Before the supply company got in the game, when barnyard manure was comparatively plentiful, the grower would only get about one third of the stuff he paid for. The remainder was sand and water. After dumping in half a car of sand and gravel, not to mention sawdust and shavings, the contractors would play a hose on the car. Manure is usually bought by the ton, and as it absorbs water like a sponge you can imagine where the grower got off.

The supply company has its own teams and does its own loading. Its inspectors keep a hawk-like eye on the contractors, and any load that fails to come up to standard is promptly turned back.

The company also maintains a research department, where chemists analyze the fertilizers purchased by it. The company buys nearly all of its fertilizers on a unit basis—that is, it pays for the actual amount of plant food, the three principal constituents of which are nitrogen, phosphorus and potash.

This department also investigates any of the new brands of fertilizers, and reports upon their merits to the growers.

The research department is also proving of great value along the lines of fumigation and spraying. Citrus trees are afflicted with numerous insect pests, the most damaging of which is the black scale. To get rid of them the growers are compelled to fumigate once a year. This gas is composed of cynanide, sulphuric acid, and water. The work is largely done by local co-operative fumigation associations affiliated with the exchange.

The cynanide and sulphuric acid is purchased in enormous quantities by the company, and notwithstanding the tremendous demand for these materials which the war brought on, the supply company was able to procure an adequate supply at practically pre-war prices. Had it not been for the supply company, and had the growers been compelled to go into the open market for their fumigation materials, it is safe to say that a third of the citrus-fruit acreage of Southern California would have suffered irreparable damage from the scale.

The company has also kept its research department on the hunt for a cheaper and more effective method of fumigation. At present a method involving the use of hydrocyanic acid is being perfected which it is believed will be just as deadly to the scale, and will save the growers a large amount of money each year.

During the past eight years the use of cover crops of melilotus has become especially popular. The demand for this seed soon began to exceed the supply. This was anticipated by the supply company, whose business it is to watch out for just such things, and it proceeded not only to buy up all it could get hold of, but it also arranged for the planting of a large acreage of the seed stock. The company handled nearly $60,000 worth of cover crop last season, and more than $80,000 the previous year.

The fruit growers also use yearly a large amount of spraying materials in getting rid of the red spider and fungus. The company has purchased for them nearly $180,000 worth of equipment for this during the past two years.

During January of this year southern California was visited by a severe frost. Temperatures dropped to 22 above zero, and the enormous crop of oranges and lemons, the largest in the history of the industry, was in great danger. Now the fruit growers fight frost with fire. Nearly every grove is equipped with orchard heaters, commonly known as smudge pots, which burn a low-grade distillate or fuel oil.

The cold spell last January lasted nearly a week, with the result that the local stores of oil became exhausted. Again the supply company was the rescuing angel. Headed by Secretary Barnes, members of the office force in Los Angeles worked day and night to get the oil to the growers. Every empty tank car in the city was commandeered, filled with oil and rushed to the scene. Within twenty-four hours of the first emergency call 300 carloads of oil were on the way at express speed. Had it not been for the supply company and its prompt action it is estimated that fully 50 per cent of the crop would have been totally ruined.

Now as to what the company has done for the marketing side of the industry.

The largest single item in packing-house supplies is boxes. In a normal year the California Fruit Growers' Exchange uses nearly 20,000,000 boxes. This includes both the boxes the fruit is shipped in and the field boxes used for picking.

It was this [CONTINUED ON PAGE 62]



What Wallace Said When We Asked Him for His Picture

"I HAVE been raising oranges and enjoying myself here near La Verne, California, for several years, and there isn't much else to tell. However, as you request, I am enclosing a photo of myself standing alongside one of our seventeen-year-old navel orange trees. Came near sending a snapshot of myself and my Airedale bitch on the front porch of our bungalow, but the blamed pup looked so much more intelligent than myself that I did not dare risk the comparison.

"I do not know as I altogether approve of the modern policy of publishing writers' photographs. I have never fully recovered from the shock of seeing Cobb, Tarkington, and Kelland for the first time in print. The disillusionment was terrible. Why not let the public imagine the writer to be a handsome six-footer instead of a little runt?

"Yours, WALLACE."

Asbury Lever, Herbert Quick's Successor on the Federal Farm Loan Board

By W. L. Nelson

EIGHTEEN years ago, when each member of the National House of Representatives had his own individual desk and chair, and when at the convening of Congress seats were chosen by lot, big and genial Claude Kitchin, member from North Carolina, turned to the occupant of the chair next to the one he himself had just drawn, and asked:

"Little man, whose seat is this you've got?"

"Mine," came the answer from the "little man" who occupied but did not fill the big, roomy chair.

"Don't kid me," returned Kitchin; "I want to know whose seat you are holding. Is it your father's or does it belong to some other member?"

"It is mine, I tell you," replied the occupant with just a bit more feeling.

"How did you get it?" asked Mr. Kitchin.

"How did you get yours?" was the rejoinder.

"I was elected by the people," replied Mr. Kitchin. Then with an added word or two to give emphasis, the little fellow, who really looked more like a page or clerk, replied:

"I got mine the same way."

The gentleman from North Carolina was not satisfied. He turned to the occupant of the seat on the other side, an old acquaintance, and asked:

"Who is the little fellow in the chair next to me?"

"That," he was told, "is Asbury Lever, newly elected member from South Carolina and the youngest man in the House." Still Mr. Kitchin felt that some joke was being perpetrated. Quietly he slipped over and secured a list of the members of the House. Sure enough, he saw the name of Asbury Francis Lever. He then hurried back to his seat, extended his hand to Mr. Lever, and said:

"Well, young man, this *is* your seat. Let's shake hands and be friends; I am mighty glad you are here." Were we to follow the language of the old story we would say they were friends ever after, for the friendship starting on that day has only increased with years.

As illustrating the youthfulness of Mr. Lever, it is recalled that after he had been in the House a half a dozen years or more it was not uncommon for him to be mistaken for a page. On one occasion Hon. Bert Cochran was delivering an address before the House. Having finished with some papers to which he had been referring, and to the reading of which Congressman Lever, standing only a short distance away, had been listening attentively, Mr. Cochran glanced at Lever, snapped his fingers, and said:



"Here, page, take these papers, quick!" Mr. Lever looked as if he hardly knew what to do. Another member, taking note of things, turned to Mr. Cochran and said:

"Mr. Cochran, have you ever met Congressman Lever? Allow me to present him." It is said that never since that, as these men, both widely known in public, meet, did Mr. Cochran ever fail to express his regret at the mistake he made on that day. Of course, Mr. Lever took it all good-naturedly.

So much by way of introduction to Asbury Francis Lever, who was born January 5, 1875, on a little farm near Springhill, Lexington County, South Carolina, and who, after eighteen years in Congress, to-day at one o'clock (the day on which this sketch is written) was sworn in as a director of the Federal Land Bank, he having only a few hours before formally tendered his resignation as a member of Congress.

The story of Mr. Lever is one which might well serve as an inspiration to every country boy, and, as for that matter, to every boy in America. He was not born with riches. He had pluck, which was better. He had no silver spoon in his mouth. He had eyes with which to see, ears with which to hear, and a personality which made and held friends—all of which is infinitely better. Best of all, he had energy and perseverance. After attending the common schools of his community and putting in his vacation on the home farm, Mr. Lever graduated with the honors of his class in 1895. After graduation he taught school until he was selected as a private secretary to the late Hon. J. William Stokes, whom he succeeds. He graduated in law at the Georgetown University in 1899, and the same year was admitted to practice in his State, by the supreme court. He was a member of the state conventions in 1896 and 1900, and in the latter year was elected to the state legislature from Lexington County, holding that position until his resignation to enter the race to fill the unexpired term of Congressman Stokes in the 57th Congress. Since that time he has been elected to each succeeding Congress.

It is as the author of the Smith-Lever Bill that Mr. Lever is best known. Just here it might be said, by way of explanation, that in 1862 Congress passed the Morrell Act, providing for the support and maintenance of a least one college in each State. In 1887 the Hatch Act, providing for the establishment of agricultural experiment stations, was enacted into law. Then came the Adams Act, but the cap sheet of all is the act bearing the name of Mr. Lever. The Lever Bill is for the purpose of carrying the knowledge which had been accumulated and acquired through the other sources to the public. Past legislation, to which we have referred, resulted in the accumulation of very valuable information. The Smith-Lever Bill has for its object the dissemination of this knowledge in the most practical and far-reaching manner through men in the field.

So, to-day, this statesman, friend of farmers, and, I believe I might add, friend of everybody, enters upon his new duties, filling the place made vacant by the resignation of Hon. Herbert Quick, whose term of office would not have expired for five years. The position pays $10,000 a year, $2,500 more than is the salary of a Congressman, and is looked upon as a life position if the holder so wills. It is exceedingly fortunate at this time, when certain features of the Federal Farm Loan system are being attacked and questioned, that one so familiar with every detail, and so in sympathy with the cause of agriculture, occupies the position now filled by Director Lever. It is of interest to know that when the bill creating the land banks was up for consideration Mr. Lever not only attended every hearing, but he also has to-day his own notes of each of these hearings, which will prove valuable to him in his new position.

It is seldom that a more appropriate appointment to public office is made. Director Lever has a background of worthy achievement, and the good he has already accomplished for the agricultural interests of the country is worthy of an older man. Further expansion of the Farm Loan system may be expected under his guidance, and I believe we may confidently look for further developments in rural credits that have been long needed.

Bob Hildebrand—"The Man Who Takes Those Live-Stock Pictures"

By Tom Blackburn



This is Bob himself—in action

TRAMPING around the barnyards and show pens of America, Robert F. Hildebrand is building a history of the live-stock industry through the eye of his camera. You'll probably see him if you go to the International this month.

Let a farmer win a blue ribbon at the state fair, and it's not long before he slips over to Hildebrand and remarks:

"Bob, I wish you'd snap me a picture of Agatha May Gwendolyn."

"Sure," replies Hildebrand, and this photograph is the history of one man's accomplishment. Scattered over the country, as it always is through press channels, it may give thousands of people inspirations in breeding.

The picture hits the climbing breeder just as hard. "Serves me right for not entering at the fair," he mutters darkly. "I could have put it all over them with Dashing Daisy." So it goes, with Hildebrand's pictures showing each fellow how to do better.

Hildebrand is believed to be the only exclusive animal photographer in America. He began taking pictures of live stock at the International some eighteen years ago, and is acquainted personally with every prominent breeder in the country.

The public knows him by his newspaper portraits of the winners at that great show each year. Hildebrand sees the exhibits before the judges do, and takes pictures of what he considers the best specimens. His decisions are remarkable in nearly always coinciding with the final awards. By this quick action he is able to send out the pictures first.

"You'd think it odd if I told you I learned all my stock-judging out of a book," he remarked once. "A man can't photograph animals unless he is a good judge and knows what character to bring out. It's harder, much harder, to shoot pictures of animals than of humans."

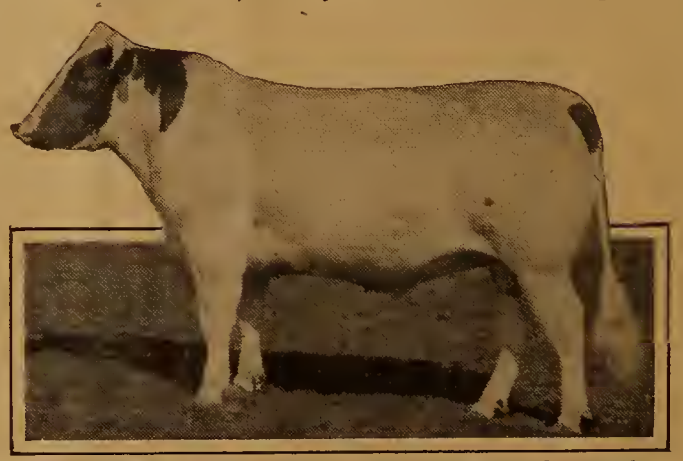
Hildebrand is the best publicity man the business has. He scatters his photographs lavishly all over the world, boosting American live stock.

Only yesterday the staid old Bank of England asked for some fine cattle and sheep pictures to hang on their walls. "We think it will encourage our customers in their stock-raising by them," they wrote. A few years ago the Argentina republic tried to get Hildebrand to move to South America to devote his time to "publicizing" the animals on the pampas.

Spreading through the banks and business firms of the United States is the belief that meat production must be encouraged. Most of them are advertising their convictions by means of neatly framed pictures of prize winners on their walls.

Several changes of evolution are revealed by a glance at the negatives taken during nineteen years. Hampshire hogs seem to have gained more "Irish" to their snouts in this period, and the increase in size of Poland-China is quite evident. A photograph is the only way of marking down the excellence of an animal for future appreciation. Dan Patch, the pacer, is dead, but his famous foot action lives on in the gelatin record. The Hildebrand studio has a library of 30,000 negatives—pictures of every well-known animal born in the twentieth century. Rag Apple the Great, who recently sold for $125,000, has his archive beside a classic White Hall Sultan.

When Hildebrand opened his shop in 1907, nobody understood the use of photographs in advertising and selling; nor did they know how to picture the fine points of an animal. Dan Hanna of Cleveland, son of the late Senator Mark Hanna, gave Hildebrand his first order.



This is Hildebrand's picture of Rag Apple the Great, who sold for $125,000 to Robert E. Pointer of Detroit, from the Pine Grove Farms at Elmira, New York

"I stole a ride to get there—that shows what kind of a start I had," comments the photographer.

His cleverness in bringing out selling points in an animal has built up the use of illustrations in live-stock advertising. Breeders can see by a picture whether their herds will "nick" successfully and profitably with another group, and are able to buy without personal inspection.

Movies of barnyard animals began in 1918. "If we could show motion pictures of champion cows yielding gallon after gallon of milk in the nethermost corner of the State, we could do real missionary work," an agricultural college wrote him. Thousands of feet of farm films are printed each week for breed associations, agricultural colleges, and railroads. These animated pictures are awakening more attention than "stills" possibly could.

Bob Hildebrand's great value to the industry lies in his ability to show other folks what is being done in the live-stock business. He moves from State to State, making records. As a photographer he has been a fervent missionary for better live stock. So widely is his work known and used that you can scarcely find an advertisement of a pure-bred live-stock sale that doesn't have some Hildebrand photographs in it. His work will be a greater monument to his name than could be builded of stone, for it is intermingled with the growth of live-stock interests in this country.

What is Bred in the Bone Will Come Out in the Flesh

By Joseph E. Wing

"TOM WILSON has shot Steve Woodman in the head of Pine Tree Canyon." So read the letter from a young cowboy on the old range. This much, no more. That is a typical cowboy letter. He can talk well enough, get him once started over the camp fire, but he can't write letters more than a little bit. But what a flood of memories this simple announcement brings up! And what a drift of speculation as to what will be the outcome of this later escapade of my old friend, Tom Wilson! For Steve was rich, and his friends are rich. A dirty, sneaking, dishonorable dog, Steve was, for there are some dead of whom you cannot speak well, and I admit that I am glad that he is dead. Nor do I believe many will mourn his loss. I was his neighbor, and knew him well.

But poor old Tom! He was a bad one too, but there was about him some qualities of kindness and generosity, a sturdy manliness too, and a dashing daring about him that made you like him even though you could never trust him out of your sight. In some ways he was the worst, certainly the deadliest, man I ever knew, and yet so far as I know he never killed a man amiss. I presume it will go hard with him now, for if he runs he will lose his position as ranch superintendent and his cattle; if he stays he will lose all he has in defending himself in court.

I have known a number of bad men in my time, and no two of them were alike, no two had the same excuse for being bad. Generally, I think, there is the same root—a desire to possess things that someone else lays claim to. Most of us were in the mountains to possess things that had never belonged to us—free grass, mines, timber; it was but another step to desire to possess a maverick calf that after all might have belonged to us, and so Tom reasoned while he was foreman of the Carson City outfit across Brown River.

It began by his branding some mavericks for the Carson City people. The manager knew and acquiesced in this. Later Tom, who had a little bunch of cows all his own, that most dangerous of all possessions for a ranch foreman, branded a few calves for himself. Maybe he was not so careful as he should have been as to their parentage. Anyway, it finally made trouble with the manager, and he asked for Tom's resignation.

Tom is a big fellow, immensely strong and very quick-tempered. There was a fearful fight between him and the manager, in which the manager was fearfully bruised and battered. Tom is quick to repent, partly no doubt from policy, partly from real good-heartedness, and he bound up the manager's broken face and begged his forgiveness. Partly out of good nature and partly because Tom had a hold on him, the manager forgave him. They parted good friends, apparently, the friendship and kindly feeling was real on the part of the manager, I am sure, and he wished only to reform Tom and make a man of him. That was the way Tom put it. "You have me in your power," he told the manager, "you can either make an outlaw or a man of me." And the manager believed it. Tom also believed it, probably. I believe it was his ambition to be good and respected, but he had a longing for a herd of cattle all his own. And so mavericks were a great temptation to him. A dead shot with a rope was Tom; a dead shot with a gun, too; and the best and most daring rider I have ever seen. A man of perfect self-reliance too, never caring for help in difficult undertakings, caring only for companionship, for he was the most companionable fellow, and generally kept a lad with him, a strange quiet lad who watched you and said nothing. Where Tom got this lad and whether or not he was his father none of us ever knew.

After the rupture with the manager, Tom took his little bunch of cows down on Brown River and began ranching for himself. He pre-empted a little rocky canyon, put up a tent, made some rude fences, and looked after his own affairs very closely. The lad was with him a good deal, and old Uncle Lou, a harmless old fellow, ex-trapper and stage driver, lived with them sometimes. Uncle Lou had a little band of horses, and it was these horses that got Tom into trouble when the two deputy sheriffs were killed.

Now, along Brown River at this place there are great cliffs and canyons and narrow, rocky trails that only the initiated can find. Often the trail will lead along the riverside, perhaps near the water's level; then, to avoid a headland projecting sheer into the water, it will climb high up among the shelving cliffs and wind in and out among perilous places where one would hardly think a coyote could find footing. And there are mesas above the cliffs, level stretches of dry and bunch-grass-covered range, cut in two by deep and narrow arroyos, and above all is the Big Mesa, reaching almost into the clouds and clear into the region of moisture and rainfall and grass and tree and flower. And along this Brown River country runs the secret trail of the outlaws who escape by it from their crimes of train robbery or horse-stealing. Never, after they have disappeared into the desert of San Juan country below, headed northward, does a sheriff hope to overtake them until they have emerged from these mountain fastnesses, somewhere in Wyoming; and other times the outlaws of Wyoming disappear into this region and reappear months after in Arizona. They are seldom in a hurry when they reach the country of the cliffs and mesas. There is safe hiding and good feed for their horses and game in plenty, and often our own men befriended them, never at least affronting them, for reasons of policy. Very seldom, indeed, do we see them at all on our side of Brown River.

Just what dealings with these outlaws Tom ever had no one knows, but there is no doubt that some of them made his camp a resting place, and their influence would surely be for bad. Not that it is probable that they ever confided much to him of their crimes—they are a silent lot of fellows generally—but they would drop hints now and then, no doubt, and ask suggestive questions, and Tom no doubt was weak enough to feel flattered by their attention and feel their influence mightily.

I have often wondered what his life was like in his younger days. He came to our country from Colorado, and to there from Texas, and all he ever told me was that he had grown up in a cow camp. The boy had yearnings for a better life, and confided it to me, wished he had had a good mother to teach him. Had he had a different training he might have been—but this is a digression.

Tom's next trouble came from his taking in a gambler from Saltero, a fellow named Junkett, a worthless fellow himself, hiding out for a time, I think. Tom kept him all winter at his cabin, fed him, made much of him, confided to him all his plans, and told him all the history of his life. That was Tom's weak point—he was such a friendly, companionable, trusting fellow that when he liked a man he told him everything, it seemed as though he could not help it. And Junkett fattened on Tom's fare, and honeyed around him until he had all Tom's secrets. Alas, some of those secrets are buried with him, so it is doubtful if all Tom's history can be written now. He had learned to be wary of confiding things. So he went away in the spring to Saltero to get supplies, and left Junkett at the camp. And Junkett proceeded to tell the manager of the Carson City outfit of Tom's raidings among the Carson City mavericks. So when Tom returned the manager came to see him, and upbraided him for not keeping his promise. And when Tom rode to camp, filled with rage and bitterness at the betrayal by his friend, and met Junkett, he gave him the fearfulest pounding that ever man had to live through. But he repented of it at once, bound up Junkett's wounds, and helped him to the railway. He begged to be forgiven and gave Junkett a hundred dollars to pay his hospital expenses, and supposed it was all right, but it was not. Men of Junkett's type never forget nor forgive.

It rankled in Junkett's bosom that he had been and was a sneaking, ungrateful dog, and that he had been found out, and that he had had to take a beating from a man who was better in body and soul than he, so he laid plans for revenge. It was not an easy problem. The revenge must be had at no cost to his own safety. Nothing short of Tom's death would satisfy the hunger of hate that consumed him. Finally he went down to the hamlet that made our county seat, swore out a warrent for Tom's arrest, got himself an ally in a deputy sheriff, and started in on a man hunt. Literally that was it. There was no desire to arrest their man—they wished only to kill him.

Taking an obscure trail, they approached his camp to find him absent. Scouting carefully down the canyon to the river, they found a man there and, coming up as near to him as they dared, they opened fire. He promptly took to the rocks and returned the fire with vigor. They should have known that it was not Tom, or they would have been killed promptly. They took to cover, and a battle ensued lasting an hour or more, each trying to get a shot at the other and firing at the slightest exposure. Finally, by separating and keeping themselves hid, they uncovered their man and killed him. When they came up to him they were alarmed to see that it was not Tom. Then the fear came over them that they may have killed one of my men, as it was on our range and our men would be riding there at that time of year. So they loaded him on the pack horse and carried him by our camp at night and out to the railway. There, to their unspeakable delight, they got him identified as "Flat-nosed George," a desperado from Arizona, much wanted down there, and for whom a reward of three thousand dollars was offered. They shipped the body to Arizona, and exulted.

Now it can be easily imagined how our men felt about this outrage, for if men were to be killed without warning or identification in our country not one of our riders was safe, except as he might prove able to defend himself. Tom especially was indignant at the outrage that had been attempted on him, and though he said little he brooded over the affair night and day, and seldom went near the river again, moving camp to our side of the river and bringing all his cattle over with him. And then we needed men, and gave him employment at the spring round-up and moving cattle from the desert to the upper pastures on the great mesa.

However brave and resolute a man may be by nature, the thought that he is being hunted by those who would kill him on sight and from behind cover is a dreadful thought, and makes cowards of the best of us. During those days Tom grew moody and restless, given to fits of abstraction, and, while he said little of Junkett or the shooting over on the river, there was a dangerous look on his face when he thought of it.

Bad men, so far as I have seen, are generally bad men because they are fearful, because there is always the haunting dread in their minds that someone is thinking and planning to kill them. And so it was with Tom. More than once when riding the lonely canyons he fancied he heard a horse behind him, and hid behind cedar or rock and waited with his Winchester ready, and woe betide Junkett had he ever crossed the trail at such a time. But Junkett had no idea of braving the lion in his den, more especially would he be most unapt to seek him alone.

It is indeed a dreadful thing to feel that you are hated and hunted by desperate men, and to know that you have done things that make the world willing to see you die. Not that Tom had not plenty of warm friends who [CONTINUED ON PAGE 41]

My Father as I Knew Him



ONE of my earliest childhood memories is that of sitting on Father's knee and listening with open mouth to the stories he told of his cowboy days on a Utah ranch. It was way back in the eighties, when the range country was still new and Indians roamed through the mountains, and every man, law-abiding or otherwise, carried a gun on his hip, that Father heard the call of the West and answered it. He worked at mining for a while, but ended up as foreman of the Range Valley Cattle Company, who grazed the fertile valleys and broad mesas up along Green River. Here he learned to love the life of the herder, and dreamed dreams of some day starting a home out there of his own, with a certain Ohio lassie by his side. He loved to explore the cliff-dwellers' houses, many of which had not felt the tread of man since the mysterious disappearance of that thrifty race. He has often told me of the day he discovered the new creek which he named Florence after Mother, and how they had to cross the swollen Green River coming home, and very nearly were swept away into its angry rapids. Here it was that he learned to know the plant that he afterward established in Ohio, and helped other people start in nearly every State east of the Mississippi—alfalfa. It was with a heavy heart that he returned to the little farm in Ohio when his father sent for him. Everything seemed so small after living in the great West. But he stayed, and saw his dreams come true in Ohio just as they would have in Utah had he stayed. ANDREW S. WING.

How the Pennsylvania Dutchman Gets a Profit From His Farm

By Henry Irving Dodge

AS I said last month, in the first article about my visit with the Pennsylvania Dutch farmers to find out whether they had any ideas you could profitably use, the first four words of their farming bible are Industry, Thrift, Honesty, and Cleanliness.

And the greatest of these is Thrift.

"The other three," said a rural philosopher out there, "avail nothing without thrift.

"If anyone of our people is unthrifty and slovenly at heart, the stern disapproval of his neighbors would make him hide it. He avoids even the appearance of evil. If he has a poor piece of machinery, he keeps it in the barn, out of sight. You don't see a mower or a hay rack left to rust and fall apart out of doors, a monument to the farmer's laziness. And his dooryard and fences are as well cared for as his cattle. And you'll no more see dirty cattle in this section than you see dirty kitchens."

Industry with the Pennsylvania Dutchman, then, means getting the most he can from his effort of brain and muscle. In no sense is he a shirker. He will work hard, but always for himself. An ordinary farmhand out there, who sees no dishonor in wrestling with a red flannel undershirt to spare his wife on washing day, would deem it a disgrace to work in another man's garden for pay. For any other than a mere boy or a man over seventy to do ordinary garden work about the village is taken to mean that he is a person without set employment at a regular man's job in the fields or the stables. It places him in the shiftless class.

By the Dutchman's thrift I don't mean simply putting money in the bank and letting it grow, slow but sure, like an oak tree, and just as welcome in our old age when we need a shelter. I mean *constructive* thrift, *preservative* thrift, the "stitch in time saves nine" kind of thrift, the kind of thrift that keeps the money out of the pockets of middlemen and puts it into the pockets of the farmer—the only kind of thrift that'll make a farmer rich, anywhere. Else how did that Dutch cigarmaker pay off a $4,000 lien on his live stock and equipment in four years? Tell me that. Other farmers may claim they haven't got the right kind of land. They may plead poverty. But that fellow started with $100 only, plus reputation; and he's not an exceptional case either.

Our friend never buys what he can produce, and he never wastes a by-product, however humble. Here's a sample: Along the edges of his corn field or his wheat field—in a space that cannot be economically devoted to other purposes—he plants broom straw. Broom straw bears a seed that is excellent for chicken feed. Converted into eggs alone, this article more than pays for the growing of it. But the farmer takes his straw to the broommaker, together with some old broomsticks the good housewife has saved up or purchased for 10 cents apiece. For 20 cents the maker converts these articles into a first-class broom, which would cost $1.25 at the crossroads store.

And so on, all along the line. A farmer friend gave the snap away when I said: "You fellows don't waste anything at all, not even an old, rusty nail."

"That's where we get our profits," said he. "Why should we throw 'em away? A nail or a nut in a place where I can find it saves me a trip to the village, saves time, to waste which is the most immoral of all, since it cannot be recovered."

Even at this late day many of the Pennsylvania Dutch farmers make the shoes for their families, and repair their own harnesses. They are very adept at that sort of thing.

Said one farmer, pointing to a great chest containing scraps of iron, bits of leather, and the like: "That's one of my savings banks."

"It strikes me your whole blooming farm is a combination factory and savings bank," said I. He laughed.

"We husband the wheat when it is in the barn, and also the coin into which the wheat is turned. I object to the stigma of penury which has been cast upon us," said he. "We give, but we do not give indiscriminately, but where giving will do the most good. To a neighbor in need we give unsparingly of our time and effort, taking no heed of the value thereof in terms of coin. If Friend Brown's barn burns, the whole countryside joins in the rehabilitation of his property. If his wheat is burning for the sickle, we go to his aid. But," he added reflectively, "in this we're not peculiar. The same is true of all good farming communities."



The present beautiful stone house on the Jacob Yodder farm, built some fifty years ago, is typical of Pennsylvania Dutchland. Many farmhouses are grander, more imposing—few are less pretentious. In brief, this is an average stone farmhouse. Happy John Kintzer, the tenant farmer, who stands smiling in the foreground, is a typical farmer of this section. The Kintzers have the average Pennsylvania Dutch family of nine children, three of whom are at home, while the other six are operating farms of their own.



Parlor or "best room" in the Kintzer house. Observe the motto on the opposite wall, "Bear ye one another's burdens." Nothing could be more typical of the family and community sentiment that pervades Pennsylvania Dutch farmerdom than these beautiful words.

The Pennsylvania Dutch farmer is thrifty up to the very last day of his professional career. In some parts of the country the tiller of the soil, when he decides to move to another section, distant, or quit farming, puts up his goods and chattels at auction. He's through with them. The public may have them for any old price. They are chucked together, haphazard, wagons unwashed, harnesses unoiled. And they *do* bring any old price.

But immediately the Pennsylvania Dutchman decides to sell out he becomes a merchant. In the first place, he advertises that all his farming implements and the like will be sold at auction sometime between February 1st and April 1st, for this is the period during which all such affairs occur. The specific date of the sale is so fixed as not to conflict with some other farmer's sale. During the intervening months our farmer prepares his stock for the sale. His cattle are fattened, his horses conditioned, his harnesses are oiled and properly repaired with new straps and copper rivets, his wagons washed, and his machinery made spick and span and usable. And it's notorious that he gets the best kind of prices for his goods and chattels.

Years ago, the understanding that an abundance of "free liquor" would be served at such sales proved a considerable lure. But for some reason or another the practice was abandoned. To this day, however, it is advertised that those who attend will be provided with a dinner. Such occasions resemble a Donnybrook Fair in many respects. Local politicians avail of them to get acquainted with the people. Automobile salesmen are always present. Even the peanut, pink lemonade and fake jewelry men are in evidence. At these sales the ambitious young man with no other capital than his reputation may acquire a farming outfit on ten months' credit, or longer, paying little more for the privilege than if he dealt with cash. *This liberal policy often has the effect of putting into business a new farmer whenever an old farmer retires.*



The "arch"—common to all farms in this vast section. The arch is a subcellar, two or three steps lower than the ordinary cellar. In it is kept butter, cream, and other articles destructible by heat. Practically no ice is used by the Pennsylvania Dutch farmer, the arch rendering such an expedient unnecessary. The thickness of the wall of the entrance to the arch, some two and a half or three feet, indicates the solidity of the foundations of the Pennsylvania Dutch farmhouses, which are without exception either brick or stone.

The Pennsylvania Dutch farmer's food costs him practically nothing in cash. The eggs belong to the housewife, and with them she furnishes the table. A certain good woman told me that she had $50 egg money left over at the end of the laying season.

"Gosh," said I, "and with those husky farmhands eating as much as a horse! How do you do it?"

She was greatly amused at my astonishment.

"Easy enough. I have only to buy sugar and salt and tea and coffee and spices—only the things we don't raise."

"You don't raise butter, do you? I thought you sold all your milk?"

"All but the Sunday milk," she corrected. "That won't keep over, because we use no ice. So we make butter of it—plenty for our own use. We don't believe in keeping cows and then paying exorbitant prices for butter to put into the pockets of middlemen and profiteers."

Constructive thrift, again.

In the matter of meats, in Pennsylvania Dutchland, the killing of cattle and hogs is done in November. Beef is kept frozen as long as possible, and is then cut into steaks, fried, and packed solid in huge, stone crocks, customarily of 16 gallons. When the crock is filled, hot lard is poured in right up to the top and the great container sealed up. The lard, filling the interstices, keeping the air away, preserves the meat. In this way every family has enough meat food to last—three times a day—until the next killing.

Few of us can understand the excess of industry of these farmers. Still fewer can appreciate their thrift. We have been accustomed to regard the latter as sordid, grasping. On the contrary, it is only scientific, beneficent, moral—in a word, highly civilized avoidance of waste which we would all do well to imitate. It is as natural for the Pennsylvania Dutchman to work as it is for a Shanghai rooster to crow. Ask him why, and he can't tell you, any more than the chanticleer can tell you. He has been an early and late toiler for generations and generations. In him is bred a capacity for enduring physical effort. It is second nature to him. But it's a mistake to assume that he doesn't know anything else but work. True, the Pennsylvania Dutchman thinks a heap of his church and thinks a heap of his reputation. But he's not a wholly serious proposition. He has his social side.

"You make slaves of your children," I said to one farmer.

"That's only your point of view," said he. "We don't *make* them anything. They breathe the air of industry from their birth. They breathe the air of order. They see it all about them. It's suggestive. To them, thrift and order are a matter of course. They don't know anything else. That's why your word slovenliness is not in our vocabulary.

"But the trolley car carries our boys and girls to the village and the movies every Saturday night. And we have our automobiles that bring the town to our front gate. And the telephone"—he chuckled—"my old woman spends a good deal of her time listening in, as you call it. And I do myself, sometimes—on a rainy day," he admitted. "And the rural delivery brings us the news. But, most of all, the phonograph. It plays hymns and band music and dances."

"Of course you listen only to the hymns," I said. He puckered his brow and grinned broadly. "I don't object to a little dance music now and then—on week days," he hastened to qualify.

I hope that this will give you some idea of the way the Pennsylvania Dutchman makes farming [CONTINUED ON PAGE 63]

Herbert Quick Tells Why He Thinks Farmers Haven't Organized

By Donald Wilhelm

IN WASHINGTON the other day, Judge Lobdell of the Farm Loan Board asked:

"Why is it that, while folks who live on farms constitute practically half of the population of the United States, their influence in national affairs is practically negligible?"

In New York the Editor of FARM AND FIRESIDE set forth the same inquiry, in his own way; and many hundreds of farmers are asking the same question, and have been asking it a long, long time.

There is no sound and sufficient reason why the farmers should not be able to speak in united voice about matters that vitally affect agriculture, and about holders of public office who are in position to affect their vital interests.

Therefore it is worth hearing what one of the most genuine and most astute of real farmers has to say—Herbert Quick:

"I would not place myself in the position of throwing cold water on any movement for the organization of farmers on a national scope, provided that it has a proper basis. Organizations for political purposes are perfectly legitimate. The influence of the farmers on the Government in both state and nation is very much less than it should be, and there are certain crucial problems which the farmers might solve, not only to their own benefit, but also to the benefit of the entire country, if they had a nation-wide organization.

"I am old enough to have observed personally several great movements for the political organization of farmers. I remember the Anti-Monopoly movement in the West when I was a boy. I remember when the Grange movement had a very strong political trend. I remember the Populist movement, which at one time had a very important group of representatives in both branches of the National Congress, and when whole States went for the Populist party. The country owes a great deal to the ideas which were forced upon the country by these movements, started very largely by the farmers, but each of them finally went to pieces.

"The trouble with all such organizations, both in the past and now, is that they are efforts to organize the farmers from the top down instead of from the bottom up. Agriculture needs organization from the bottom up, and the only way in which this has been done, or in my opinion ever can be done, is through the building up of local organizations along definite and limited economic and social lines.

"Every farm locality should have a number of organizations of farmers, and every farmer should be able to realize actual beneficial results from such organization. The ideally organized farm neighborhood is one in which every farmer will belong to a number of local organizations having definite objects in view, from which he can realize day by day and year by year actual and definite benefits. In order to be good, an organization must be good for something in particular—something which the farmers can see, feel, realize, and point to as definite beneficial results. Such organizations as these are farm bureaus, co-operative associations for such things as the purchase of lime and fertilizers, co-operative organizations for the marketing of definite products, and the like. If a man raises fruit he should belong to a fruit-marketing association; if he raises lambs he should belong to an organization for marketing lambs; if he raises bees he should belong to a bee-keepers' association. For the purpose of studying his methods of culture he should belong to horticultural associations. He should belong to specific organizations for the ownership of breeding animals. The elevator associations of the West have done a wonderful work as organizations; so have the organizations for the improvement of the roads, for the maintenance of county agents, for the betterment of schools, for local fairs. The condition to be striven for is one in which every farmer and the members of his family will belong to as many co-operative associations as there are phases in the local life and branches of his business in which co-operation can benefit. This is organization from the bottom up.

"What good will this do, it may be asked, in a general way?

"Well, in the first place it will prevent the disappointments and futilities of great organization schemes which start off in a blaze of glory, financed by someone perhaps who has an agitational end in view, and which finally fizzle out, leaving the farmers exactly where they were before. This is what it will save us from, but it will finally accomplish the very ends for which wide-spread organizations strive. After the farmers of the United States are organized locally for specific, definite, and limited purposes, they will begin to understand their general needs; their co-operation on state lines will follow and will extend to national lines, and the country will finally have a body of organized farm opinion, based on a study of actual problems, and invincible if it ever chooses to step into the arena of politics.

"This will take time, but it will work. In my opinion nothing else will work. Time, however, is exactly what impatient people who want to pry the world off its hinges immediately will not spend on the problem. They want results immediately, and very often they want those results not for the farmers, but for themselves. They may be perfectly honest, but their objects are not always agricultural objects."

It so happens that something of an illustration of what Mr. Quick says a farmers' organization should be may perhaps be found in the farm bureaus, which are suggested—tentatively, of course—simply as a constructive illustration of what might by farmers be taken as a ready-to-hand means with which to accomplish a desired end. They have, of course, "agricultural objects." They have been organized, in entirely democratic fashion, so that anyone can join, "from the bottom up" rather than from the top down. They exist "locally, for specific, definite, and limited purposes," in all the States, and have so well demonstrated their worth in helping to guide local county agents, home demonstrators, and junior activities, that the Department of Agriculture no longer subscribes to the nomination of an agent to any new county unless there is a farm bureau to aid him. "Every farmer," in all States, and "the members of his family," in a steadily increasing number of States, can belong. "The co-operation on state lines" has already come about. In fact, a dozen of the state farm bureaus met early in the year in Ithaca, and made plans for extending the state organizations to "national lines," so that, it seems, the "country will finally have a body of organized farm opinion based on a study of actual problems, and invincible"—perhaps—"if it ever steps into the arena of politics." But the national organization of the bureaus, though it is self-sufficient in point of dues and entirely aloof from the Department of Agriculture, does not and cannot, because of its promised constitution, enter politics. It knows, clearly, that politics has wrecked many a farmer organization in the past, and some of its champions solemnly aver: "We've seen the handwriting on the wall, and there's nothing doing in the political line for us. Not for the present, anyway."

Almost every farm organization has been of value, if in doing no more than to teach to some farmers the value of pulling together. A farmer organization, the United States Agricultural Society, almost of itself secured the establishment of the Department of Agriculture, in 1862. The Grange and Farmers' Alliance movements were the chief powers that, in 1889, elevated the Department to first rank as an executive department. Since those early years farmer organizations by the score have had their ups and, notably, their downs, and the following points are as clear as the side of a barn after a little study of them.

1. Most of them have been organized from the top down, as Mr. Quick suggests, and it is axiomatic that in a democracy leaders cannot, satisfactorily or enduringly, organize from the top down, any more than they can build a pyramid from the top down. For the foundation is the most difficult part of any structure.

2. In the nature of organizations built from the top down, in the past and in the present, everything depends on the leaders. That is why now we find in one section, or one State, or one county, a farmer organization accomplishing a great deal, and, almost next to it, a similar one of a given name accomplishing nothing. Largely for these two reasons every farmer organization tied in with politics has failed to endure.

Coming round the other way, through the front gate, we can argue:

1. Any enduring farmer organization that is to be truly representative, and accomplish the most for farmers, must spring from the soil and grow from the soil, and have its roots always in the soil—and not in the keeping of any group of leaders.

2. Its leaders must be farmer leaders, with their feet on the ground and their noses to the ground.

3. Those leaders should be addicted to no political program, but ready to hand an ultimatum or lend support to any such program as will help the interests of agriculture.

If these three points hold, then it is clear that you can't mix politics and farming. Where is a business men's organization that attempts to serve both masters—politics and business—and is successful?

When Mark Hanna covered his control of the Granges by seeing that most of the Democrats held most of the offices; and when, a little later, the whole Grange organization, with all its apparent political promise, was weakened by political machinery that drove out the South, wise farmers learned that they knew precious little about the political game. And why in the world, if they are real farmers, should they be expected to know that dreadfully complicated game?

George P. Hampton, who was in charge of the farmers' committee that put through the parcel post, who did a lot to put through the Farm Loan Act, and is now managing director of a central committee on reconstruction, called the National Farmers' Council, says that you can get the farmers' organizations together for specific purposes, but you can't get them together for all purposes.

"The farmers haven't reached that stage so far," he said, "where they can and will express themselves as a group. Experience shows that the most you can do is to get them to unite for specific purposes in a central committee, as we did in fighting for the parcel post and rural credit systems, and are doing now in the Farmers' Council. When you get them to unite in that way for specific purposes, you can, first, get the full power of associated organizations; next, you avoid any organized jealousies or controversies, because we are not concerned in them; and, third, remembering that the great mass of farmers are not organized, you make the issue primary, and as a result you get a far greater response from the farm world as a whole."

If all the farmers would unite, when occasion calls, for specific purposes, through their existing organizations, in the manner advocated and demonstrated by Mr. Hampton, they could accomplish safely, and at a very low cost, a great deal in the way of national legislation.

The Kind of Horses I Believe in Breeding Nowadays

By H. W. Gossard

EIGHT or nine years ago I began to think of the future of the horse business. Frankly, I could see no market for the light horses which we were using at the time. The automobile was doing light delivery work in the city, while draft horses were used for short-haul stuff. As a horse breeder this presented a situation which commanded some thought.



H. W. Gossard

Accordingly I decided to breed the light, range mares I had on my farm at Preston, Kansas, to draft stallions. The mares weighed 850 pounds, and I first crossed them with a big grade Percheron stallion. The blood nicked nicely, and the foals at maturity scaled 1,100 pounds.

Then I bred these mares to a pure-bred Percheron stallion, a grandson of Pink, the famous Percheron stallion. This animal weighed about a ton. The result of this cross promises to weigh from 1,400 to 1,600 pounds at maturity.

My results are not singular. I have been observing conditions throughout the Southwest, where we sell a lot of horses and breeding stock, and I note that these ranchmen are doing the same thing. They realize the small horse is not as efficient as the large animal, especially in the range, where farms are not counted by the quarter section.

The first cross of the range mare and grade Percheron showed the characteristics of the Percheron breed. The colt was well-muscled, clean-legged, had good bone and size, and the head was intelligent and clean. The second cross brought these things out more forcibly. Moreover, this crossing range mares gave me an animal with the spirit of the range horse and the strength of the Percheron.

These heavier colts are easier handled, because they are more gentle and easy feeders. They get along on about the same amount of feed, but will do much more work and have wonderful absorptive powers.

I think the horse business is due for a rational, steady growth, with an increasing demand. The price of horses during the war did not advance materially, but feed costs did. Consequently, from now on, for the next five years, we will have a good domestic and foreign demand, and feed costs will be higher.

Our farmers who are fortified to supply the demand, which will be for drafty horses, will make money. You know, it takes four to five years to make a crop of horses, and now is the time to get started in the business. I think it is a good idea to get rid of the light geldings and to breed the light mares to draft stallions.

We have been selling a number of stallions to men who are doing this sort of thing through Texas, Oklahoma, Arizona, and other States in the Southwest.

How I Made Butter That Won the National Dairy Prize

By Homer B. Gall

Chief Dairyman Athens (Ohio) State Hospital

SUCCESSFUL buttermaking, like anything else which is successful, depends principally on careful attention to the smallest details. Far be it from me to claim to know all there is to know about this industry, but that my methods do get results is shown by the fact that the entry made from the Athens (Ohio) State Hospital was awarded first prize at the National Dairy Show, held in Columbus in 1918. My methods of making butter as given here will supply information upon which my fellow dairy and creamery men can base their own conclusions.

There are a great many things to be taken into consideration, and I always work on the idea that it is the little things that determine the difference between really fine butter and that of mediocre quality. If we want to make better butter it is first necessary to improve the quality of our cream, and so we see that our cows are fed a good balanced ration. We keep the pasture free from foods of a volatile nature such as wild onions, as such foods give objectionable flavors to the fresh butter.

Cleanliness is the next thing to be given attention. Our barns are thoroughly swept and scrubbed daily, and at no time do we allow dust or cobwebs to find a resting place on the walls, ceilings, or sills. Our cows are combed and brushed daily.

Manure does not lay about the floor to cause an objectionable odor, and everything possible is done to keep the barns in a sanitary condition. Thus we avoid a large count of undesirable bacteria in the milk. Before milking, all the udders are washed, and after the milk has been drawn it is very carefully handled at all times, every precaution being taken to keep it free from dust.

Immediately after the milk has been drawn from the cow it is taken to the weighing-room and weighed. Here the individual records are kept. The milk is then put into cans and taken to the milk-room, where it remains sealed until the entire herd has been milked. It is then taken to the creamery, where it is separated and cooled immediately.

All the cans, buckets, and bottles used here are thoroughly washed and sterilized after using. The other articles used in the creamery are scalded and, when possible, sterilized, and kept in a sanitary manner. Special care is taken of the separators, permitting no filth to remain in them from one separation to another. The milk is separated twice each day, after which the cream is placed in the compartment of the refrigerator used for this purpose, and where it is kept at a temperature of 40 degrees F.

The cream from each separator is kept in sealed containers, and we never mix the cream from one separation with another.

Our cream is never kept longer than five days before churning, as I do not believe in keeping cream longer when it is to be used for butter, knowing that it is impossible to make good butter from stale cream. Our cream which is used in the making of butter is separated to test 40 per cent.

When it is time to make butter the cream is placed in the pasteurizer and heated to a temperature of 140 degrees F. for thirty minutes. This destroys most bacteria and food flavors, enables me more easily to control the ripening process, and gives a butter with good keeping qualities. A commercial starter can be used more successfully if the cream is pasteurized.



Homer B. Gall

After pasteurization the cream is set at a temperature between 65 degrees and 70 degrees F., and is now ready for the starter. To prepare my starter I use one quart of sweet milk and heat it gradually in water until the temperature reaches 200 degrees F., at which temperature it is held for one hour. I then cool the milk gradually until it reaches 90 degrees F., and the culture for producing lactic-acid bacteria is added. After mixing the culture with the milk it is cooled to 70 degrees F., holding it at this temperature for about 24 hours. It is then sour and called "mother starter," and is used in preparing starter for the cream.

I then take 100 pounds of skim milk, heat to 200 degrees F. for at least one hour, then cool to 70 degrees F., and add one quart of mother starter, letting it stand for twenty to twenty-four hours. This is then stirred, and used to ripen the cream. My starter is now added to the cream, and I always make sure that the starter has a good flavor, because a bad starter is worse than none at all. This is important.

The amount of starter used is about 10 per cent, due to the very rich cream which we use. Of course, the amount of starter used varies according to the temperature and the grade of cream, but I try to have my cream test 40 per cent. This batch stands for a period of nine hours, then is cooled in a temperature of 40 degrees F. until I am ready to churn.

The churning is of great importance, so I give this particular attention, washing the churn well with hot water, and then with cold, before using. The cream is strained into the churn to avoid lumps. The churning is done every five days, and at no time do I have the churn more than one third full. This sometimes causes an extra churning, but I have found that the butter can be worked more evenly if the churn is but partially filled, and the agitation is greater. Immediately after putting the cream into the churn the coloring is added, .7cc. of liquid color to one pound of butterfat during winter months and .4cc. to the pound during summer months.

There may be some who do not agree with me in regards to the amount of coloring to be used, but with Holstein milk the results from this amount have been very good, my butter having a nice straw color. When the butter which won the national prize was made I used .4cc. to each pound of butterfat, because the cows were on pasture. The temperature has always received due consideration, and I prefer 53 degrees F. during summer, and in winter 56 degrees F.

It requires from twenty to thirty-five minutes to complete the churning, but there are several things we must look after if we intend having good butter. The most important things are:

1. See that butter granules are about the size of walnut kernels or corn kernels.
2. The buttermilk should be of a light blue color.
3. Don't churn too long or the butter will contain too much moisture, and it will not keep so well.
4. Be sure to churn enough. If you don't the butter granules will be too small, and consequently many will be lost.

As soon as the buttermilk is drawn from the churn the butter is washed with water of about the same temperature as the cream was when first put in the churn. Care should be taken in washing the butter, for if the water is too cold it will cause a tallowy appearance in the product. If the water is too warm it will make the butter soft and greasy.

The amount of water to be used depends on your butter. I usually wash my butter once—although two or three washings could be given—using about the same amount of water as I had cream to start. After the butter has been thoroughly washed the salt is prepared by sifting and washing, being careful in your search for foreign matter which is often found in salt. The amount of salt used is one ounce to one pound of butterfat, and then I put one pound of salt in the batch for good measure, because I generally make about 500 pounds at each churning.

I use a combined churn, and work the butter 20 or 22 revolutions. The churn is stopped occasionally, and the butter is moved from the ends to the center of the churn to distribute the salt evenly through the product. To work the butter depends upon the condition of the butter and the amount.

When the working has been completed the butter is packed solid in wooden tubs lined with wrapping paper. The tubs are then covered, and placed in the refrigerator, for one to two days. It is then put into one-pound prints, wrapped and distributed.

What You Can Do for the Young Foal

By Dr. W. P. Schuler (Oklahoma, A. & M. College)

THERE is too much unnecessary loss of young colts at foaling time. Most of this can be prevented by proper preparation of the mare for foaling, and by the observance of a few simple rules after the colt has come into the world. Horses nowadays are too valuable to lose by neglect at birth when a little attention will start them on the way to healthy life.

It is important that the young foal get the first milk from the dam. The first milk, often called colostrum, looks thick and yellow and differs materially in composition from the subsequent milk. It is a natural purgative for the removal of the material that has accumulated in the foal's digestive tract during the last few days of his development. The prompt removal of this material is essential to the life of the foal. If the colt is unable to stand and nurse, he should be aided in obtaining his first meal from his dam.

The foal that makes his appearance normally, and is able to stand and suck, needs but to be let alone as long as mare and foal are both doing well. The young foal will be better for it. By regulating the food and exercise of the mare, the foal may be kept thriving and in the pink of condition without any special attention.

There is a high death rate among foals, due largely to lack of understanding on the part of the caretaker. It sometimes happens that the new-born foal cannot breathe because of membranes enveloping the head. In such cases the membrane should be broken with the hand. Occasionally a new-born foal does not at once establish the function of respiration. In such cases the body should be rubbed briskly until breathing starts.

Soon after birth many foals are troubled with digestive disorders, which must be remedied at once or they will prove fatal. Again they are often troubled with an infectious navel disease, which usually proves fatal to the young foal.



Mares and foals in a blue-grass pasture

If the digestive tract has not been cleaned within twelve hours after birth, and the youngster presents a droopy, listless appearance, such as eyes not bright or ears lopped over, something must be done to stimulate the action of the bowels. This can usually be done by giving internally two ounces of olive oil or castor oil, and by injection of warm water into the bowels.

The oil must be given carefully to avoid strangling the foal. The water used in the injection should be at blood heat, and have added to it a little glycerin. Inject gently with a common two-ounce hard rubber syringe, taking care not to rupture the tender membrane. This will lubricate the passage and stimulate the bowels to action. The injection may be repeated each hour until the matter is passed, which should be within five hours from the time of giving the oil.

Young foals are often troubled with diarrhœa or scours, which is apt to prove fatal if it occurs soon after birth. There are a number of causes of this disease, perhaps the chief one being changes of an unknown character in the composition of the mare's milk, due to poor health, lack of exercise, or to the mare's becoming fretful when kept away from the foal, for a time, soon after foaling. The foal feeding on this changed milk induces indigestion and diarrhœa. Some mares give a very large flow of milk, particularly when fed rich and stimulating food, and if the foal is permitted to take it all, digestive disorders and diarrhœa are likely to result. The same often happens in early spring when the mare is pasturing on a rank growth of succulent grass. Other causes are the non-removal of the fecal matter, mare and foal confined to unclean stables, and the like.

The treatment is the avoidance of conditions likely to cause such disorders. If the dam is properly housed, fed, and exercised there is very little danger. At the first appearance of such trouble we should attend the foal and remove the cause, for even then it may be too late. If it is due to an oversupply of milk, the dam should be milked in part by hand.

Never give an astringent with a view of cutting off the discharge, as the trouble is probably caused by an irritant in the stomach or bowels which must be removed before a cure can be effected. The best plan in all such cases is to expel the disturber with a laxitive, such as two ounces of olive or castor oil, and later, when the irritant has been removed, to check the discharge.

Young foals are very commonly troubled with navel infection or joint ill, which is a very fatal disease, particularly after the joints become affected. This disease is due to filth germs that gain access to the body of the foal by way of the open umbilical vein of the navel at birth. Soon after these germs enter the navel they set up inflammation. The navel becomes enlarged, pus forms, and is absorbed into the system.

It should be understood that simple hygienic measures will prevent all such diseases.

Useful Things Uncle Sam Has Found Out About Farming for You

By John Roberts

THE other day I sat in a conference of officials of the Department of Agriculture in Washington. I had no business there, for it was not a public meeting. But I had put my head in the door of an office to see an official of the Department and found the conference, and before I could back out I was invited to remain.

What I heard at this meeting of some of the most prominent members of the Federal Department impressed me a good deal. I cannot tell you just what the discussions were or the conclusions reached, but I can give you the thought that dominated there. It was simply this:

American farming has reached a point where brains, more than any factor, and more so now than at any other time, are going to pay the biggest premium in agriculture. By brains I don't mean scholarly training particularly, but rather sound sense and good business judgment as a foundation, and a capacity for progressing from learned facts and experience, whether one's own experience or that of others. The cost of producing farm commodities is on a rising scale. Labor, materials, everything entering into the running of a farming business are at unheard-of prices. The prices the farmer receives for his goods are keeping pace in some cases; in others they are not.

In all cases, farming is on a new plane economically, and to cope with high costs of production, so as to come off with a profit and not a loss, will require wits and shrewd management. It means that poor farming will be less and less profitable. It means that headwork will be more and more profitable. It means that the man who has brains, and will use them, can beat the corn game, for instance, at the start by using better seed, and thereby assuring the increase in yield needed to make its production pay a profit. The live-stock man can play to a surer thing by quitting his scrub-stock lottery and taking to pure-breds. He can still further cut the corners and assure his profit by studying feeding rations, and by substituting the cheaper feeds for the expensive ones.

I believe we're going to profit by the high cost of producing. If the year 1920 doesn't see an increased practice of thrift and good farming on American farms, I'll miss a guess. It takes a period of stress to bring our wits into play—a necessity to Mother Invention. The next season will seek out and reward brains. You'll be able to find them in that way.

You Can Double the 1920 Corn Yield This Fall

We need to wake up to some plain facts about seed corn. We've been half dozing for a number of years with these facts right in front of us, not more than half seeing them, and scarcely using a half of what we saw. The first fact is that the average production of corn in this great corn country of ours is only 26 bushels an acre, although some farmers in nearly every section somehow are able to get four times that yield. The second fact is that the least expensive method of increasing corn yields is to use seed of better quality. I'm quoting the Department on that. The third fact is that the difference between 25-bushel yields and 50, 75, or 100 bushels an acre is largely due to delay or negligence in selecting a supply of seed. Selecting seed *from the field in the fall*, and not *from the bin in the spring*, is the solution. It's getting late now, but there is still time in many fields to hunt out the best-producing stalks. The best seed corn must be well adapted to the seasonal and soil conditions where it is to be planted; it must be grown on productive plants of a productive variety; it must be well matured, and preserved from ripening time till planting time in a manner that will preserve its full productivity. The Office of Corn Investigation of the Department has proved the importance of those points in tests. For a series of five years twelve well-bred varieties were tested in ten Northern States, equivalent lots of seed being used in each State. Varieties that produced most in some States were among the poorest in other States. Seed ears taken from the highest-yielding rows of ear-to-ear breeding plants have repeatedly produced better than seed ears taken from poorer-yielding rows. Seed ears from the best-producing stalks found in a general field produced more than seed ears taken without considering the productiveness of the parent stalks. The third point I gave above was proved by taking 400 ears and dividing them into two equal parts, one part being well taken care of, and the other placed in a barn as corn is ordinarily cribbed. The well-preserved seed gave a yield on poor soil 12 per cent higher than the poorly preserved, and 27 per cent higher on fertile soil, notwithstanding the fact that both lots of seed germinated equally well. Get a bulletin from the Department telling how to store seed corn so it will keep.

Scrub Stock is Costly

It looks as if the scrub sire hadn't long to stay here. The Department is enrolling thousands of farmers in its Better Sires, Better Stock campaign. If you have a pure-bred of any kind—horses, beef or dairy cattle, hogs, sheep, asses, goats, or poultry—you are qualified to enroll and receive the official emblem which the Department is awarding to keepers of pure-breds. I should not have listed poultry among pure-breds; they are not, the federal officials say, but are standard-bred. And of course the Department is still called upon to explain the misuse of "thoroughbred." There is no such thing as thoroughbred cattle, hogs, and so on. That term applies properly only to a breed of horses—Thoroughbreds—and the Department discourages its use in any other form. There's more money in pure-breds, not because they are pure-breds, but because there is more meat or higher production in them if they are well selected. Department officials cite two simple instances. Here's the first:

A New Jersey boy was influenced to buy a high-grade cow for $155. The cow on freshening gave 24 quarts of milk, and kept it up for a long period. The father owned five cows, average cows for the neighborhood. They were fresh in the spring. Their product did not equal the product of the cow owned by the son—five times the labor and five times the feed, in comparison with one good cow.

Here's the second:

An Oklahoma farmer had two registered Shorthorn bulls, yearlings, that he priced at $100 each for breeding purposes. A butcher saw the bulls, asked the price, but learned they were registered, and that it would take $100 each to buy them. He bought them, killed them, and stated that they were the cheapest cattle he had bought for some time because they cut the better kinds of beef and more of it. Get aboard! Add your name to those who have pledged for pure-breds. Ask the county agent or write to the Department at Washington for an enrollment blank. It costs you nothing to join. I suggest also that you ask the Department for its new bulletin on breeding.

Science and Chickens—

Speaking of the practical value of well-bred stock, here's a brand-new story of good blood. The Department recently announced some rather striking results from a test in "grading up" poultry carried on at its experiment farm at Beltsville, Maryland. The federal poultrymen apparently had decided there was a lesson for them in the success of dairy breeders who have graded up something from nothing with a pure-bred sire. You know what I mean. Every now and then some enthusiastic dairyman stops you with a story—usually true—of some meek and lowly herd of cows that rose to bovine eminence in dairy production after a pure-bred bull was put at the head of the herd. What the poultrymen have just done is this: They mated mongrel hens of unknown ancestry with standard-bred males. The result of crossing a White Plymouth Rock male on mongrel females weighing 4.33 pounds apiece was a first generation progeny weighing, at the same age, 5.68 pounds each. Fowls of the second-generation cross—another standard-bred male with pullets of the first cross—weighed 5.98 pounds apiece, while in the third generation this was increased to 6.49 pounds—a gain of 2⅛ pounds to the bird over the original mongrels. Almost as noteworthy results were obtained by the use of standard-bred Barred Plymouth Rock males and mongrel hens. Here the total gain during the three generations was a little over two pounds—2.09. The original mongrel hens weighed 4.4 pounds. Grade progeny of the first generation cross weighed 5.63 pounds at the same age; those of the second generation, 6.22 pounds; and those of the third generation, 6.49 pounds. So far the investigations have had for their objects increase in size and weight and improvement in uniformity of type. The work will be carried further in studying the transmission of egg producing and other characters. The specialists regard the results as extremely important to poultrymen. A possible gain of two pounds to the bird by the use of a well-bred rooster is a convincing argument for good blood in your poultry flock.

In Time of Winter Prepare for Summer—With Ice

Here is a lesson from the drummer who sells straw hats and Palm Beach suits in the dead of winter. Build that icehouse this month. The Department is renewing its campaign of last year on "Harvest an Ice Crop!" It wasn't the Department's fault that the country suffered for lack of ice this season. It had campaigned all last fall and winter for icehouse buildings and filling. As a matter of fact, most of the trouble came from the very poor yield of ice on account of the mild weather last winter. At any rate, this is the time to take thought of preventing an iceless summer next season. If you can harvest an ice crop and are interested in houses, ask the Department for some bulletins on their construction. They also tell how to put up ice. As between the above-ground kind of house, the cellar type, and the half-above-and-half-below icehouse, the specialists say the above-ground houses can, as a rule, be more economically constructed than either of the other designs. Excavations are expensive to make, and difficult to insulate and drain properly. Insulation and drainage are two of the most important factors in the preservation of ice. It is true that the temperature of the earth varies less than that of the air, but the fact that the temperature of the earth at six or eight feet below the surface remains at or about 55° F. the year round makes it quite as important to protect the stored ice against the earth heat as against the heated air. It is more difficult to remove ice as needed during the season from pits than from structures above ground. Slight advantages are apparent at harvest time in favor of the cellar or the half-sunken types of house, and under some circumstances they will be preferred to the other type. Here is a method of ridding ice ponds of green spawn, or algæ, which sometimes grows so profusely that it prevents a good clean ice from forming: Copper sulphate crystals in a cloth sack, hung to a pole and trailed through the water until the salts are dissolved, will do it. One or two treatments of the sulphate during a season, at the rate of one pound to 100,000 gallons of water, will be sufficient to keep down such growth and make the water clear and pure.

You will be glad when the hot summer days come on if you have an icehouse full of clear, pure ice. It's purely a business proposition these days of high food costs.



He Took the Poor Old Farm His Brothers Scorned—and Made It Pay

By H. G. Wood

JOHN MATTHEWS is my neighbor down here in Mississippi. He had eleven brothers and sisters. They all grew up, looked the farm over, decided it was too hopelessly poor to do anything with, and moved away. John saw possibilities in it, stuck, and made it pay.

When he took the 160 about ten years ago it was heavily mortgaged and unproductive. To-day John Matthews is practically out of debt, has a rich modern farm and one of the best graded dairy herds in the South. He is well-to-do, much better off than any of his brothers and sisters, whom he has helped a good deal, too, incidentally.

I am going to tell John Matthews' story in the hope that it may be an inspiration to you if you have an unpromising proposition, and to bring out the point that it is the man who sees future possibilities in the things he has right at hand, and who is willing to work to materialize what his mind sees, who wins.

Without money and without credit, John Matthews has paid for the place twice, built up the run-down soil, provided for his mother and father, cleared up the debts—secured and unsecured—and built a credit equal to that of any man in the community. To-day he is worth more in property and money than all the rest of the family put together.

John Matthews is a "sticker." He may be found at any time, day or night, winter or summer, cold or hot, wet or dry, on his little 160-acre farm in Monroe County, Mississippi, just six miles east of the town of Okolona, except when business calls him away, or when he attends church on Sundays.

He'll not tell you much about what he has accomplished on the farm. He is very modest and unassuming. But ask the business men of the town where he trades, or inquire of his nearest neighbors. They will tell you the story of his struggles and how he has made good. They have watched him as he silently toiled in the day—yes, and late into the night.

And that brings me down to one of the secrets of his success—he is "everlastingly at it." He is one of the few men in this world who can work successfully with his head and hands, both at the same time and in the same place. There is not a hired man on his place who does more hard work in a day than does the owner himself. Not only that, but he is "head over heels" in love with his work. I verily believe that John Matthews had rather work for a small wage on the farm than to command a big salary in town.



John Matthews, Monroe County, Mississippi

> "TALK about opportunity! I studied law out of a forgotten set of 'Blackstone's Commentaries' I found in an old barrel." ABRAHAM LINCOLN.

Here is another secret of his success: he is never discouraged. He hits the same lick when things are looking "blue" as he does when "everything is lovely and the goose hangs high." He has no time to waste in grumbling and complaining about the weather or bad crops, or the thousand and one other things that some farmers make a "fuss" about.

Ten years ago, when his father gave up in despair, John agreed to take charge and do the best he could with what was left. At that time the place was a typical cotton farm, producing almost enough cotton to pay for the corn and other feed stuff consumed in making the crop. John tried this method for one year and decided to make a change.

He built stanchions in the old ginhouse, and began to milk the five mortgaged cows left on the place. He made butter, and sold it to a store in town to help defray the expenses of the family. A few hogs were procured, a field sowed to alfalfa, and, for the first time in the history of the place, the crops were diversified and a system of rotation practiced.

Then the young man began to study his cows and to weed out the unprofitable ones, adding the best grades he could buy as he was able. This took time. But every year more and better cows were introduced and more and better hogs grew up on the place, until to-day John Matthews is milking 19 cows, and out in his alfalfa pasture he has 75 "pigs in clover." A creamery has been operating in a near-by town for four years now, and young Matthews' cream check is right around $275 a month. Best of all though, the farm produces the feed stuff consumed. An agent for the creamery made the statement not so very long ago that Matthews was the only farmer he had met since he came to the South whom he had to caution about feeding too much.

But I would not have you think that his work has been without its ups and downs. He has had his share of troubles—perhaps more. He has simply got the bull-dog tenacity, the "stickability," and he meets trouble face to face and "keeps a-knocking." His father believed that cotton was the only salvation for the Southern farmer, and therefore discouraged his son in adopting new things. John would let the old gentleman have his say and then go ahead in his own way.

"You've tried that way of doing," he would say, "and it failed; I can certainly do that well," and on he would go.

One day, several years ago, John was scattering stable manure on a piece of corn ground back of the barn. The old man came out and saw what his son was doing.

"By Granny, John," he said, "all the fools in the world ain't dead yet! Don't you know you're simply throwing away your time putting manure on that ground? Stable manure is all right for sandy land, but it ain't worth shucks on this black prairie soil, I tell you. I know what I'm talking about. Didn't I put 50 loads of manure on 12 rows of that land there over forty years ago? And, by Granny, when fall come you couldn't tell where the manure stopped—there wasn't a particle of difference in that corn!"

"That may be true," said John as he continued his [CONTINUED ON PAGE 43]

Hazie's Children Left the Farm—Clinchit's Stayed at Home. Why?

By James H. Collins

FARMER CLINCHIT brought up four boys and three girls. All stayed on the farm until they married, and then they stayed in the neighborhood.

Farmer Hazie had only two youngsters —a boy and a girl—and both left home as soon as they were old enough to work.

And the difference was largely a matter of just plain business.

The Clinchits never undertook anything without a talk and a plain business understanding.

Neither pig nor canning clubs had been invented when these youngsters were small. But they all had separate farm interests of their own—chickens, pigs, calves, colts, a corner of the garden, certain fields, certain fruit trees, certain crops. Before Pa Clinchit gave them animals to raise, or financed their enterprises, there was always a talk about details. Johnny got the colt he wanted, but rendered such-and-such return in work, while matters of feed, pasture, care, and ownership were clearly settled beforehand. If Milly got the chicken money, it was because she assumed responsibility and did the work. There was the same understanding between Pa and Ma Clinchit about household money, clothes money, and the number of men coming in the threshing crew, the cultivation of Ma's berry patch.

But over in the Hazie family nobody knew where anybody stood.

Little Hank Hazie worked like a Trojan all summer, raising a litter of pigs, under the impression that they were his own, only to find that Dad sold them to the butcher just before fair time, and didn't remember giving them to Hank. Neither Mrs. Hazie nor Charlotte ever had money for themselves. They got clothes and a few trimmings of life on a temperamental



The Clinchits never did anything without a talk and a plain business understanding

plan, according to whether Dad Hazie felt prosperous or poor.

A business arrangement among members of the Clinchit family was as clear as a pig-club contract. They never put such things in writing. But all the details were discussed, and obscure points raised and settled, with sometimes a little shrewd bargaining. Pa and Ma Clinchit began married life that way, when he provided so much of the crop money for running the house and allowed her all she saved for her own, and she led him to make a will, putting property matters in good shape for an emergency.

> "Don't permit the young men to drift away."
> ABRAHAM LINCOLN.

Long before they left school the young Clinchits were good hands at business. In the industrial world they would have been capable salespeople—maybe captains of industry. They always came to you with a clear, well-thought-out business proposition. When one of them had a pig project in view he not only started by having a definite understanding with his father, but also had decided exactly what he wanted from Pa Clinchit, and how and when. That gave a basis for going ahead and getting results, and enjoying them one's self.

But the poor Hazie family! It ran something like a factory where everybody is on a piece-work basis, and the boss likely to cut a piece rate overnight. Hank and Charlotte would have been as good hands at business as the Clinchit youngsters —if they had ever had a chance. But Dad Hazie "hated to be bothered with details." Hank might develop an ambition to enter a prize acre corn contest. But because business ran at loose ends on the Hazie farm he did not know how to crystallize the proposition and lay it before his father. In fact, he was afraid to, and felt that Dad would not be very sympathetic, anyway. If Dad Hazie gave permission it was offhand, when caught in a good humor, and then he said vaguely: "Oh, well—yes, I guess so. But you won't get anything out of it."

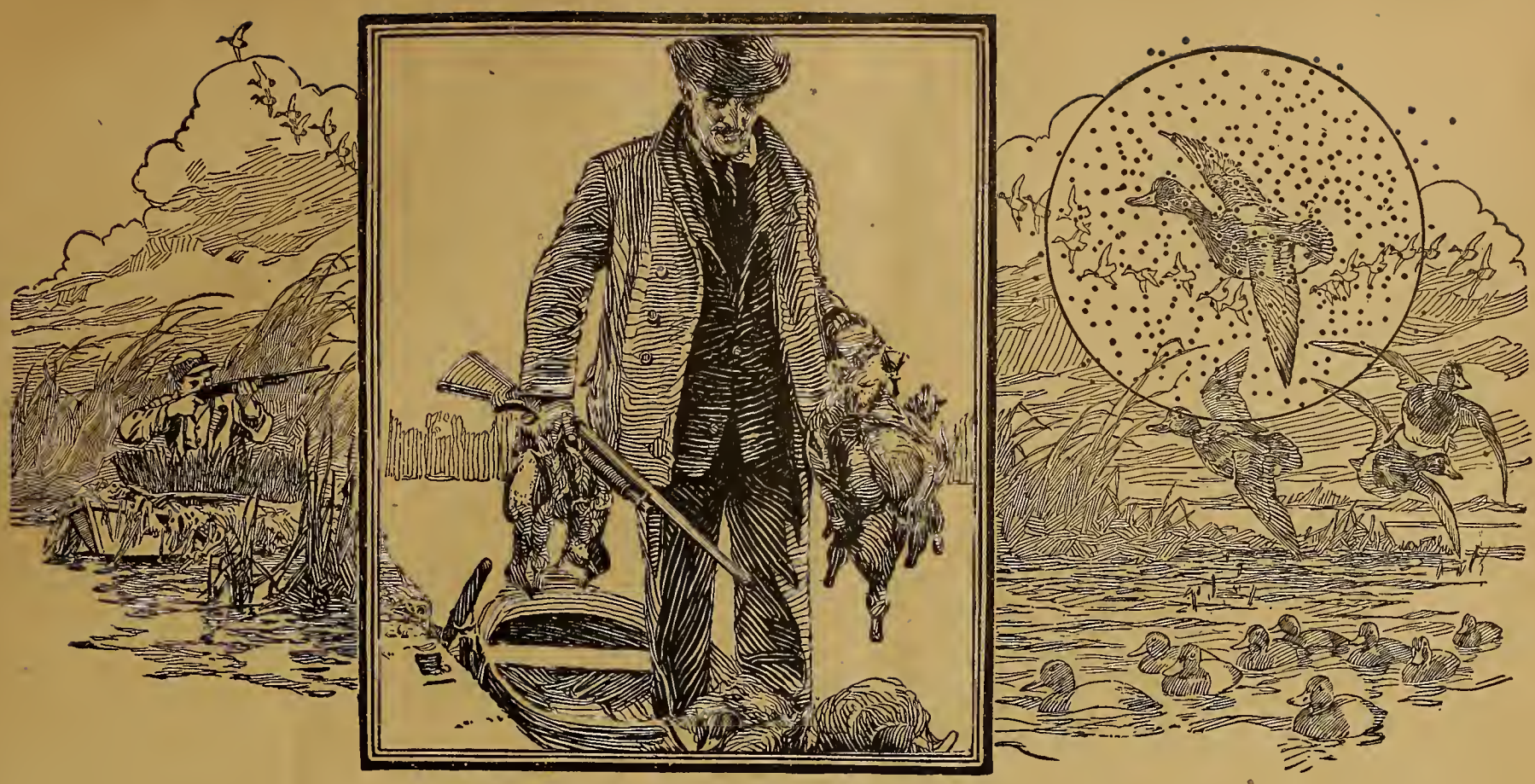
And probably he was right, because vagueness about help or horse work in planting or cultivating wrecked the enterprise halfway. Or his father did not remember next fall that that acre of corn belonged to the boy, and so Hank got nothing out of it.

Business discussion is fine mental training, apart from the clear understanding that it gives a family about money matters, property, and common interests.

The Jews are capable business men and women wherever you find them. Much of their capability grows out of Jewish family life, where discussion of business matters, even in the abstract, is encouraged and becomes a habit. Jewish boys and girls grow up in an atmosphere of mental rivalry, learning to give and take, and also to be exact in the statement of details.

Carry the same attention to clear detail and exact statement a little further, and it becomes the scientific spirit and the basis of all human progress. Children have the faculty naturally, because in their liking for facts, and with their undeveloped powers of theorizing, they are scientific.

Farming is certainly a business—more complex in details, very often, than industrial business. The farm family is an informal corporation. No "big business" corporation would run along without conferences, definitions, agreements. Probably a little "big business" on the farm would do more than any other one thing to keep the boys and girls at home.



No birds get through *his* shot patterns

THE successful sportsman knows that his bag depends almost as much upon the shot pattern, or evenness with which the shot spreads out and covers the game, as it does upon his gun handling.

The secret of uniform game-getting patterns is in the control of the gas blast from the exploding powder. This in turn depends upon the *wadding* in the shell.

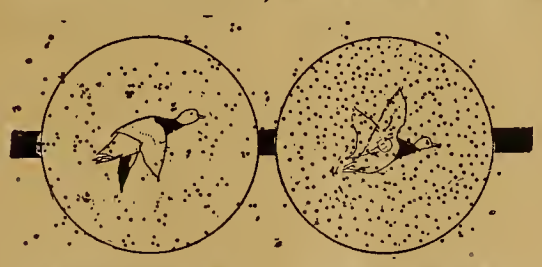
The Winchester gas control system

The Winchester system of wadding and loading is the result of repeated experiments to determine the most effective control of the gas blast.

The base wads of Winchester Shells are constructed to give what is known as progressive combustion to the powder charge. The ignition spreads to the sides, in all directions, as well as forward.

Under the heat and pressure of this progressive combustion the tough, springy driving wad expands and fills the bore snugly, completely sealing in the gas behind. In being driven through the bore this wad offers just enough resistance to the gas blast to insure complete combustion of every grain of powder, so that the full energy of the whole powder charge is developed at the muzzle. Thus none of the shot charge leaves the gun until it is being driven by the maximum energy and velocity possible from the load.

At the muzzle, the expanded snug-fitting driving wad is slightly checked by the muzzle choke or constriction, while the shot cluster travels on unbroken by gas blast or wadding, making the hard-hitting uniform pattern for which Winchester Shells are world-famous.



A patchy pattern often means a miss, many times a cripple, and sometimes badly mutilated game.

The hard-hitting Winchester pattern is evenly distributed. No game gets through, and no game is mutilated.

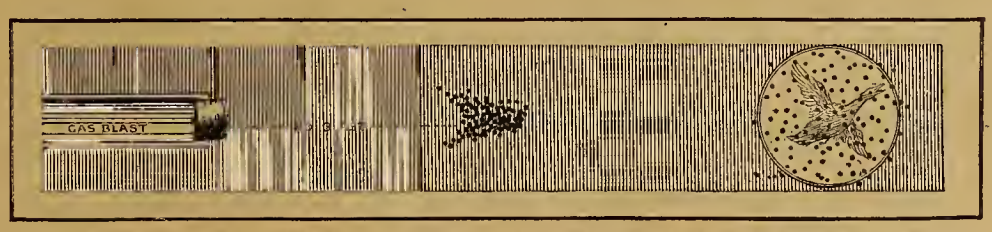
Uniform shells. From primer to crimp Winchester Shells are so balanced in construction as to insure the maximum pattern possible from any load. The broad fish-tail flash from the primer gives even and thorough ignition; the driving wads completely seal in the gas behind the shot; the stiffness of the crimp or turnover at the shell head is varied exactly according to different loads, great care being taken never to stiffen it to such a degree that it offers undue resistance to the powder explosion.

In addition Winchester Shells are, of course, thoroughly waterproof, insuring true shooting in damp saturating salt air or drenching rains. A special lubrication of the paper fibre prevents brittleness and splitting in dry weather.

Clean hits and more of them

To insure more hits and cleaner hits in the field or at the traps be sure your shells are Winchester Leader and Repeater for smokeless; Nublack and New Rival for black powder. Leading hardware and sporting goods dealers in every community carry Winchester arms and ammunition. They will be glad to assist you in determining the particular load best suited to your purpose. Upon request, we will send you, free of charge, our interesting booklet on Winchester Shotguns and Loaded Shells.

Winchester Repeating Arms Co., Dept. 323, New Haven, Conn., U. S. A.



The Winchester system of wadding. The wadding expands evenly, sealing in the gas blast all the way to the muzzle, where the wadding is checked by the "choke" or constriction. The shot cluster travels on ahead unbroken. Actual test target 320 pellets out of 431 or 74% of the shot charge (1¼ oz. of 7½ chilled) inside a 30-inch circle at 40 yards.

WINCHESTER

World Standard Guns and Ammunition

Where the Profit Lies in Pasture Land and How You Can Get It Out!

By W. L. Nelson

I WANT to tell you about a bit of false economy I have often noticed in farming that costs a lot of us more than we realize. I refer to putting stock on grass too early in the spring and leaving it on too late in the fall, with the idea that it will save in money on the feed bill.

The truth is that this practice does more harm to our pasture lands than it saves us money on feed bills.

I am in the business of farming to make money. I believe you are too. I want to produce what I have to sell just as economically as I can without hurting the machinery I work with. And pasture land is part of every stockman's working machinery. If his way of using it is harmful, he is wrecking part of his plant and equipment just as surely as a grain farmer would be if he took a sledge hammer and pounded his reaper to pieces.

I want to make money from farming so my family and I can have a house with a bathroom, electric lights, a pumping engine for a water system, an automobile, and all those other things which take the drudgery out of farming and leave me free to work with my head as well as my hands, and give the members of my family time to enjoy the pleasures of life a little. Good pasture land is one of the things that enables the stockman to make money and attain these things, and deserves care.

Only a few months ago, following a winter which was marked by a decided scarcity of corn and other grain, farmers were anxious to cut the feed bill just as early in the season as possible. The result was that many pastures were given a setback from which they will not recover before another year, if then.

Prompted by the same desire to save, thousands of stockmen each year hold their herds on grass long after they should have been put to the feed troughs. As a result the pasture lands go into winter without sufficient covering. The following season the grass makes a slow and backward start, bare spots show up here and there, and weeds and wild grasses are everywhere. The farmer who wishes to retain a good permanent pasture should not graze it too heavily or too late this fall.

I knew one far-seeing farmer to leave a fine blue-grass pasture ungrazed in the fall in order that he might have it to turn on the following spring when the new growth in other fields was making a start. Such mature grass is readily relished when winter is breaking up, and it also puts on fat almost like "old corn in the crib."

In addition to the grass covering, there should be this fall a covering of stable manure.

Here's another point: During the war, pastures never before "profaned by the plow" were put to cultivated crops, and other pastures were planted to corn or small grain. At the same time the acreage seeded to meadows or turned to permanent pastures was reduced to the minimum. They must be again built up.

The army is not the only organization that "fights on its stomach." Even the grasses of our pastures must be fed. During the war we were so busy feeding folks that we forgot all about feeding the fields, except as we fed the acres which were at that time yielding grain to feed the fighters. Nor have we in peace times always been as careful as we should have been to provide plant food for our pastures.



The farmer who wishes to retain a good permanent pasture should not graze it too heavily or too late this fall

Generally it has been the poor and little favored field or "forty" that has been given over to permanent pasture, and forgotten. We have not even always thought it worth while to provide sanitary surroundings for our tame grasses and legumes that were battling the wild grasses and weeds. Frequently they have been left to fight it out in poorly drained places, and, as a result, each year yielding a little ground, until finally they were driven back.

Spread stable manure over a part of the blue-grass pasture and note the result; use commercial fertilizer as it should be used; set the disk straight so that it will not tear up the sod and work on a part of the "hide-bound" pasture; tile-drain the low and sour part of the pasture; make use of lime where needed; hold off the stock from one pasture for a while; allow a good growth of grass as a winter covering.

On small meadow plots located side by side I have seen twice as much good hay taken from one field as from the other, and all because one piece of land had been top-dressed with stable manure while the other had had no such treatment. We have seen practically the same results from drainage.

Results from the Rothamsted Experiment Station fields in England are convincing. In the forty-seventh year of the experiment the hay crop on certain plots was separated into grasses, clovers, and weeds. The crop from the unfertilized land, which has made an average yield of 2,150 pounds of hay to the acre for practically half a century, consisted of 34.3 per cent grasses, 7.5 per cent legumes, and 58.2 per cent weeds. On the other hand, the plot that has regularly received complete fertilizers has produced an average yield during the same period of 6,080 pounds of hay to the acre. Best of all, in the forty-seventh year of the experiment the crop consisted of 88.8 per cent grasses, 3.7 per cent legumes, and only 7.5 per cent weeds.

The contrasts in hay yields at the Rothamsted Station are not greater than one can see on pasture lands in almost any part of the United States, and especially in the Blue-Grass Belt, in central Missouri and Kentucky. While one pasture will care for cattle at the rate of one steer to each acre and a half, another pasture, perhaps adjoining, will require from three to five acres for each mature animal.

Taken throughout a term of years a good pasture on a general farm should be made, and can be made, to compare favorably in profit with any part of the place. As early as April 1, 1919, Kansas grass was being contracted at $13 to $18 an acre for the season, with some exceptionally good pastures commanding $20 an acre for the grazing right. Nor is the Central West the exception. The grass on New England hillsides has acquired added value, and the Appalachian region is being developed. Men are saying, as of old, "Grass is king."

It is possible to "graze on" from 300 to 400 pounds of beef a year, and on many farms the figures show larger gains on grass alone. Each year, too, more farmers are feeding and finishing cattle on grass rather than during the winter season. There is little or no labor cost attached to the pasture.

In the United States any permanent system of general farming must include live stock. This is the same as saying that on most farms pastures must be provided. The first step is to build up these war-worn pastures. They may need the "rest cure," or they may require treatment. Whatever treatment is given should be intelligently applied. The time to apply stable manure or commercial fertilizer is not in midsummer, after the grass has made a good start. This, though, is the time to chop out and mow weeds, and this should be done before the noxious seed ripen and fall or are scattered by the wind. Ditching and drainage work can be done at almost any season, and when the ground is not frozen.

On many farms where no commercial fertilizer is used on pastures, and where no stable manure is ever hauled except for the truck patches or cultivated fields, blue-grass pastures are maintained year after year by feeding live stock on the grass during the period when vegetation is most dormant. On my home farm are two pastures which have been maintained in this manner for almost half a century.

Simple as it may seem to some, there are many who do not know how to proceed in establishing a permanent pasture. One reason for this is that, in much of the Corn Belt, meadows have after a few years, and especially when pastured, just "gone to blue grass." On thousands of farms in this section are magnificent blue-grass pastures where no blue-grass seed was ever sown. In some instances the ground has never been plowed, but after many years blue grass, "the grass of civilization," has crowded out the blue-stem or prairie grass. In other cases clover or mixed meadows have in time been taken by blue grass.

To establish a blue-grass pasture it is well to prepare the ground in much the same manner as for wheat. When the wheat is sown, add about eight pounds of timothy seed per acre, and during the winter top-dress the field with manure or straw, but not too heavily. In February or March—or, if you prefer, you may wait until April—sow ten pounds of clover seed per acre, and from one to two pecks of the best quality blue grass.

You must have quality in blue-grass seed, for much that is on the market is not only lacking in purity, but is also very low, sometimes as low as 10 per cent, in germination. On ground not naturally adapted to blue grass the quality of seed should be greater than in Kentucky and Missouri, for instance, where blue grass grows along almost every roadside.

A nurse crop is frequently sown with clover and grasses. Rye, wheat, oats, and other crops, depending upon the territory, are commonly used. The nurse crop is not, as many suppose, to aid directly the growth of the clovers and grasses, but to assist in keeping down the wild grasses and weeds which might crowd out and destroy the young grass plants. The nurse crop may bring some returns the first year, but care must be taken that it is not too heavy. To attempt to grow a full crop as a nurse crop is to endanger the life of the grass, which may either be smothered out or destroyed by the midsummer sun after the oats, rye, or other crop is removed.



Stock on some of Nelson's pasture land in the blue-grass section of Missouri



Weather and *fire* protection

In case of a fire, a *Certain-teed* roof will smother and help to confine the blaze to the building in which it starts. This protection is insurance of greater safety for stored crops and forage in outlying buildings which might be endangered by flying sparks and embers.

It will relieve you of a great deal of anxiety if you will have your roofs *Certain-teed* against sparks and burning embers. *Certain-teed* Roofing forms a permanent protection against sparks.

Certain-teed will give you year-in-and-year-out protection from weather. You cement it together in a single piece, so that the hardest rains cannot find a crevice. It is a retardant of heat and cold, making the building warmer in winter and cooler in summer. It is a deadener of sound—rain or hail beating on the roof does not make any noise.

Certain-teed Roofing is easy to lay—no skilled labor required—the first cost is much lower than wood or metal—lasts longer and costs practically nothing to maintain.

***Certain-teed* Roofing is guaranteed for 5, 10 or 15 years, according to thickness.**

The *Certain-teed* label insures you *certain*ty of quality and absolutely guaran*teed* satisfaction.

Certain-teed Asphalt Shingles

for residences come in beautiful subdued tones of red and green. These shingles present a handsome rough surface. They are so laid that three thicknesses cover the entire roof. They lay and stay flat, and will not crack or break off in the highest wind. This is due to the very heavy saturation of asphalt in the center, which makes them cling to the roof, yet permits them to "give" from a high wind without cracking off. They will prevent fires from sparks or embers—a big item, especially where a building is not within reach of city fire service protection. They cost no more than wood shingles, and are guaranteed 10 years.

(NOTE:—It pays to keep a few rolls of Certain-teed on hand for emergency roof repairs. It may be the means of saving costly weather damage to your property.)

Certain-teed Products Corporation Offices and Warehouses in Principal Cities

Certain-teed Paints and *Varnishes* are the highest quality. They will give the best paint satisfaction.

Certain-teed

PAINT VARNISH ROOFING & RELATED BUILDING PRODUCTS



Warm as an arctic- - washes off like a boot

The new U. S. Walrus which is fast becoming popular among farmers everywhere

FOR years farmers have needed a high rubber overshoe—easy to put on and take off—warm and comfortable—one that could be easily cleansed of the dirt of the barnyard.

There's an overshoe like that ready for *you* this winter. With an all-rubber surface—snow-tight and water-tight—lined with thick, soft fleece—the new U. S. Walrus is just the thing you've been looking for.

It slips right on over your regular shoes. You can trudge through mud and wet all day, and then at your doorstep—swish!—a pail of water washes the U. S. Walrus as clean as before you started. A moment to unbuckle them and leave them at the door, and you enter the house as clean and dry-shod as you left it.

Think of having an overshoe that keeps your feet warm as an arctic does—dry as a boot will—in the coldest, wettest weather! In every way the new U. S. Walrus is the farmer's ideal overshoe.



U. S. Walrus—Comes in all weights and sizes; in red, black, and white. An overshoe with an all-rubber surface that can actually be washed off after wearing. Warm as an arctic. Absolutely water-tight.

At exactly the points where overshoes usually wear out irst, the U. S. Walrus has been made *strongest.*

Ask your dealer today to show you a pair of the new J. S. Walrus.

Other U. S. Models—all built for extra miles of wear

It makes no difference whether you want a boot for the wet season, a bootee or rubber r general use, or a cloth-top arctic for the cold—you can find in U. S. Rubber footwear xactly what you need.

Every one of these models is made with the same care in details of construction as the . S. Walrus. Heavy five-ply soles—special reinforcements at toe and heel—and *always* the ghest quality rubber—these are the characteristics of every piece of U. S. Rubber footwear.

The U. S. Seal, wherever you find it, means solid wear and long service for your money.

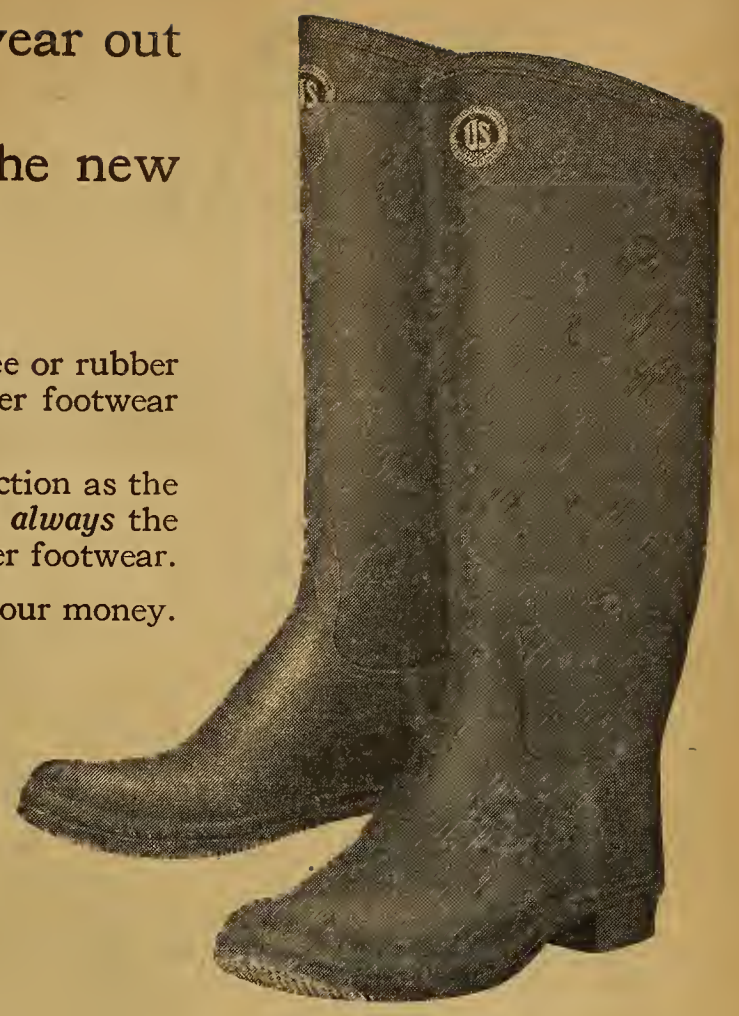
U. S. Boots—reinforced where the wear is hardest

1 **The sole**—Five soles in one, all of the finest rubber and fabric.

2 **Back of the heel**—Every step you take strains the seam in back. At this point every U. S. Boot is reinforced with *ten thicknesses.*

3 **The toe**—Has a cloth lining, a rubber and fabric strip around the edge, a "vamp" lining, a toe cap, and a sheet of highest quality rubber on the outside.

4 **The "bend" in front**—A boot has no lacing in front to give as you walk. Every mile you cover, the rubber at this point bends and buckles 750 times. Six heavy thicknesses give long wear to U. S. Boots at this point.



U. S. Boots—All sizes and styles: Short, Storm King, Sporting, and Hip. In red, black, and white.



U. S. Bootee—Comes in red, black, and white. Hy-Bootee, six eyelets; Lo-Bootee, four eyelets. Worn over the sock. An all-rubber surface, easily washed off. Water-tight. Reinforced where the wear is hardest.

S. Arctics—Come in one, two, ur, and six buckles, all weights d sizes. Made of snow-tight shmerette, warm and comfort-le. Reinforced where the wear hardest.



UNITED STATES RUBBER COMPANY AND ASSOCIATED COMPANIES — US — RUBBER SYSTEM

Ask for U. S. RUBBER FOOTWEAR

UNITED STATES RUBBER COMPANY

We Started Life Together in a Barn, But We've Made $100,000 Since

By Francis M. Sayler

IT NEVER occurred to me, until the Editor suggested it, that others might be interested in the story of how my wife and I started life in an old barn and worked our way up to something over $100,000 worth of land and fine stock out here near New Market, Indiana.

But if you think it is interesting I will try to tell it.

I was born in a log cabin on a farm in Putnam County, Indiana, in 1859. My parents were William and Malinda Clodfelter Sayler. My father died in 1908, after being incapacitated for work for many years with the worst form of rheumatism. My mother, seventy-five years old, is still living and able to take care of her own house.

My father was always handicapped by poverty. When he was thirteen my grandfather died, leaving him the greater responsibility of his mother and seven children. His little farm in Montgomery County, Indiana, was hilly, like most pioneers selected in those days on account of lack of drainage where the land was level, and persons then were so afflicted with malaria.

The soil was poor, and it was about all Father and the rest of the family could do to make both ends meet and pay off the mortgage. He plodded along in this way until 1858, when he married and moved to Putnam County, Indiana, where he bought 40 acres, mostly on credit.

My father was a man of intelligence and had splendid ideas, but his yoke of poverty was so heavy he seemed unable to lift it. He never could rise above the actual necessities of life. His life begot in me a greater ambition for ownership without incumbrance. I resolved to execute many of his ideas. I was determined, as old age crept upon me, to rid myself of many of the burdens he had to bear. I think that was the turning point, when I *made up my mind* to succeed, and began to plan to make my head save my heels.

As I grew to manhood I read a great deal. One sentence from a noted author has always stayed with me. It was this: "Health, ambition and poverty are the greatest inheritance a boy can receive." I was sure I had plenty of the latter.

When I was fifteen my parents moved to Montgomery County, Indiana, near New Market, where I now reside. There were six children then—two had passed away. He again bought forty acres, and the prospects on this farm seemed brighter, the land was level and more productive.

Father did succeed better here. His boys were big enough to help him, and were all taught to work; but affliction came upon him, and he was unable to work many years before he died.

My energetic good mother worked after he was gone. Meantime I had been sent to school, where I received a good common-school education.

It was in this school I met my life partner. We became engaged to be married, but when was a question. I did not have the nerve to ask her to name the day, when I had no place to take her.

One morning I was driving along the public road, thinking seriously of the marriage question and of how I could possibly get a place to take my prospective bride, when one of our neighbors, a pretty well-to-do man, beckoned me to stop. This was his rather abrupt greeting to me:

"Hello, Milbert! I hear you are going to be married."

I blushed and grinned, and finally stammered out: "I—I—would if I had a place to take her."

"Well," said my neighbor, "I've got the place. You know that farm on the Terre Haute road? I would be glad to rent it to you. There is no house on it, but maybe we could fix up the end of the barn so you could live in it. It will give you a fine chance."

My heart beat with joy to know of a place, but whether my prospective bride would live in a barn I did not know. We parted, and I was to let him know in a few days.

It was not long until I visited my friend and put the question to her. To my surprise she readily agreed. The prospective landlord was notified. The grain was moved into one end of the barn, and we fixed up two rooms for ourselves at the other. On December 31, 1884, America VanCleave and I were married, and we have lived in happy companionship ever since.

How could I help being happy and successful with a girl like that?

In about a week after our wedding we moved into the barn. We had collected together enough "stuff" to make us fairly comfortable. Some cast-away things were given us, we borrowed some, and bought some on credit.

My wife had good taste—a knack of making everything appear at its best—and, really, our rooms looked pretty well.

I had no money yet. I knew I could not run the farm without stock and farming implements, as I always felt that my success on the farm would be by raising stock.



Mr. and Mrs. Sayler

I went in debt about $400. I bought cows, horses, hogs, and some farming implements. It gave me great pleasure to know that people would trust me without security. It strengthened my ambition to carry out the teaching of my parents always to be honest.

But there came a "blue day." The payment on these things was coming due and nothing to pay it with. I did not have the "cheek" to tell my creditors I could not pay it, and I could not ask them to extend the time. My wife and I counseled together, and decided to sell the hogs, then only about half ready for market. I did this, and paid the debt promptly, with a few hogs left. I never made a sacrifice that gave me greater joy.

We then moved along smoothly, my wife made enough money from the products of the cows, chickens, and garden to keep up all the household expenses.

At the end of the year our landlord wanted us to take the farm again. He attached a small summer kitchen to the barn, which made us more comfortable.

The second year looked brighter, and we were very happy together. Our stock was increasing and our prospects for the future were encouraging. That year I bought for $10 a registered Poland-China boar, the desire of my heart and the beginning of my career as a pure-bred hog raiser. Getting into pure-bred stock was another big step forward. It will pay, no matter how little stock you have, or how poor you are. Quality stock makes quality folks.

The year 1885 was indeed an eventful one in our career. In this barn our first child was born. We did not feel humiliated over that, because a better child than ours was born in a manger, you know. Our prosperity that year caused us to farm on a larger scale. I rented 160 acres for grain rent, and kept a hired man from then on the year round.

My hogs were my mortgage lifters. I bought more registered Poland-China males, which I mated with strong, healthy sows until there was no mixture—I had full-blooded Poland-China hogs.

I raised cattle too, but never specialized with them like I did with the hogs. I kept a registered bull, which I mated with good strong Shorthorn cows, producing stock that was profitable for both milk and beef. I usually had a drove of registered Shropshire sheep.

My wife raised Bronze turkeys and Plymouth Rock chickens, and made good money out of them. She did her own advertising and selling. A few years ago she quit this industry, as it was too hard for her with all her other responsibilities.

At the end of seven years I had saved enough money to pay half down on an 80-acre farm, which I purchased for $45 an acre. I still rented ground to give my hired help employment, and to raise enough grain to feed the stock.

I had this 80 acres fenced off into 10-acre fields. This was helpful with my hogs. The pasture saved paid for the fencing. I kept from 15 to 20 brood sows, the older ones bearing two litters of pigs a year—one litter in the spring, and one in the fall. The fall pigs and about one fourth of the spring pigs were fed for market, and the others kept as breeders. I always have my pigs vaccinated, and seldom lose one.

Every few years I bought more land and got better grades of stock, if possible. I now own 460 acres lying near three shipping points, and only 12 miles from our county seat.

In 1908 I built a modern house, in order that our future years might be spent comfortably. Before building this house I had equipped the farm with modern necessities and conveniences.

My farm is all good plow land. The soil is sugar tree, poplar, and bur oak, with black land swags. It has a clay subsoil. My rotation is corn, wheat, and clover, with sometimes two years of corn in succession.

When I first began farming I noticed that clover land always produced big ears of corn, so I decided it was a good thing to grow clover.

I usually grow on the farm about 100 acres of corn and 100 acres of grain. I feed all the corn I raise. I ship a carload of cattle every other winter, which I raise on the farm. The manure from the stables and feed yards is saved and put back on the farm. This keeps up the humus. I use commercial fertilizer some years, when sowing wheat. I can grow a good yield of corn without it. I think it a mistake to use it on corn. If used at all, it should be on wheat, then the clover gets the benefit of it.

It might [CONTINUED ON PAGE 4

Tooting Your Own Horn Backwards Sometimes is a Good Idea

A FRIEND of ours who belongs to a golf club was telling us the story, not long ago, of a certain member who loved to play cards at the clubhouse, and who *always* played, though, to hear him talk, you would never guess that he cared a snap about the game.

The point is that there were always more players than chairs, and the way the man worked it was this: He would first sit down in one of the chairs. Then he would declare that he didn't care about playing, repeating this over and over, with variations—*but never would he move a fraction of an inch* off that chair. Pretty soon someone would deal the cards, and there he would be, playing, and still meekly protesting that he didn't want to.

Then there is Sayler, who writes the article on this page. With equal meekness he quietly slipped into that old barn. If anyone thought much about his doing it, it was only to pity him. But he kept on, quietly and firmly, until he made it *pay*. THE EDITOR.



This is the barn they started in



And this is what they made of it



The Comfort Car

IT is really not strange that many who formerly drove other cars, should now be numbered among our most enthusiastic Hupmobile owners.

The reasons why this is so are perfectly plain.

It is only necessary to recall that *The Comfort Car* has the name of being a really extraordinary performer among all types; that its economy and freedom from repairs are likewise quite unusual; and that it is regarded as one of the soundest and most lasting values in the automobile market.

Hupmobile



Your Commission Man Could Help You Buy Feeder Cattle

By James R. Wiley (Indiana)

YOUR commission man can give you valuable advice about what kind of feeder cattle to buy, and when to buy them, if you will only consult him, according to Ben Henderson of Indiana, who has been feeding cattle successfully and profitably for several years.

"I learned this several years ago, and have been consulting my commission man every year since, and I have usually found his advice reliable," was his answer when asked how he bought feeder cattle. "Late in the summer or early in the fall I write and give my commission man all the information that he needs to advise me intelligently. I tell him what feeds I will have and how long these feeds will last. Knowing the conditions of the cattle market much better than I do, he can tell me about when I ought to buy to get the kind of cattle I will need to utilize my feeds to the best advantage."

Last year Henderson had about 20 acres of blue-grass pasture in fair condition the early part of September. He also had 16 acres of corn that had been sown to rape at the last cultivation, which could be pastured after the corn had been husked out. For winter feed he had silage, clover hay, and a limited amount of corn, and he intended to buy some cottonseed meal to supplement these feeds.

He wrote to the commission man, giving him this information. The commission man advised him to buy a good quality of 800 to 900 pound steers in thin flesh at once, for such cattle were selling at a discount at that time—early September. Henderson replied with an order to buy at or less than a given figure. In less than two weeks the cattle were on his farm, purchased to advantage because they had been bought when there was an excess of such cattle.

The steers ran on the blue-grass pasture and the cornstalk field until early in December. The only grain they got during this time was the nubbins left in the cornstalks at husking time, and about an ear of corn apiece daily, beginning about the middle of November. They put on an average of almost 100 pounds per head on this cheap feed, and the labor of feeding them was very little.

When Henderson's steers went into winter feeding quarters they were in as good or better condition than the steers of similar size and weight that his neighbors were buying to feed out. Such steers were then costing fully two cents a pound more than he had paid for his. He had a big handicap over his neighbors because he had bought to advantage and produced 100 pounds of gain with cheap feeds and at a low labor cost.

This advantage showed up when the cattle went to market last spring. At that time the cattle market was in a bad way because of the curtailment of beef purchases for army and Allied use. Yet, in spite of this, Henderson's cattle made a profit over feed cost of approximately $1,550, including pork produced, while several of his neighbors marketed their steers at little or no profit, and some at a decided loss.

"Cattle-feeding is a specialized business the profit of which depends upon certain pretty definite economic conditions," is the way Henderson sums the situation up. "The commission man is usually in a better position to know and weigh market conditions than the farmer."

Raising Turkeys Fit for a President

By T. F. Washburn (Illinois)



Some of Miles's turkeys ready for market

TURKEYS, big bronze butterballs, are busy chasing the last bugs of Indian summer and surreptitiously swiping corn from J. S. Miles's crib on his farm near Petersburg, Illinois. Miles smiles at the antics of the young gobblers as he tacks up crates for them to ride to market in.

This story is not about how to grow turkeys, but how one man developed a marketing system. J. S. Miles, several times president of the American Bronze Turkey Association, began keeping turkeys as an experiment.

"I had been reading about Lincoln—you remember he lived down in this country when he was a young fellow—and the book spoke of wild turkeys being as thick as gooseberries," relates Miles. "The old-timers said they were mighty common, but all my neighbors said tame turkeys couldn't be raised, the climate being too damp, etc. I began keeping them just to see if it could be done."

Miles's shrewdness in selling has been the factor that has made his turkey-growing so profitable.

"We were over at the state fair at Springfield one time, and I told my wife that our birds could give the prize-winning turkeys a run for their money," says Miles. "We entered at different poultry shows, including Chicago and St. Louis, and met several city men who wanted to know if we would sell them some extra fine Thanksgiving and Christmas turkeys. That gave me a new slant on selling them—why not cultivate a fastidious trade?

"Menard County is halfway between Chicago and St. Louis. Both towns have any number of rich men who want 'better than the market affords' food. When the holidays come, the finest in the land is sought by the connoisseur."

Miles once presented the President of the United States with his Thanksgiving turkey. This proved good advertising, because a bird from the flock that supplied the presidential table sounded good to Mr. Chicago Millionaire.

The Miles flock is exhibited a good deal, and has ribbon winners at its head. About 150 turkeys are ready for market each autumn, and they bring from $8 to $15 apiece. The birds are confined to the orchard during laying season, but otherwise have the run of the farm, and thrive on the alfalfa.

"Why have you done so well with turkeys, Mr. Miles?" I asked.

"Perhaps I am one of your specialists," he smiled. "Everybody keeps chickens. I raise turkeys. I live near big cities where wealthy men will pay any price for fine holiday birds. My show winnings proved to them I had the quality, and the rest was easy."



More than 13,000 men are building your Maxwell

IMAGINE 13,000 men devoting themselves to a single Maxwell. Yet that is the picture which a little journey through the eight great Maxwell plants supplies.

If they built but that one car in a day its cost to you would represent a king's ransom.

But they are so well organized, their work so very definite, they are so expert in the special one thing they do, and they are aided by so many thousands of uncanny and superhuman machines, whose accuracy is down to 1/1000 of an inch, that you pay but a small price for a Maxwell.

A great aid to the economy of manufacture is the use of many, many millions of dollars so that a 10-cent piece saved on a bit of material often runs into amazing figures.

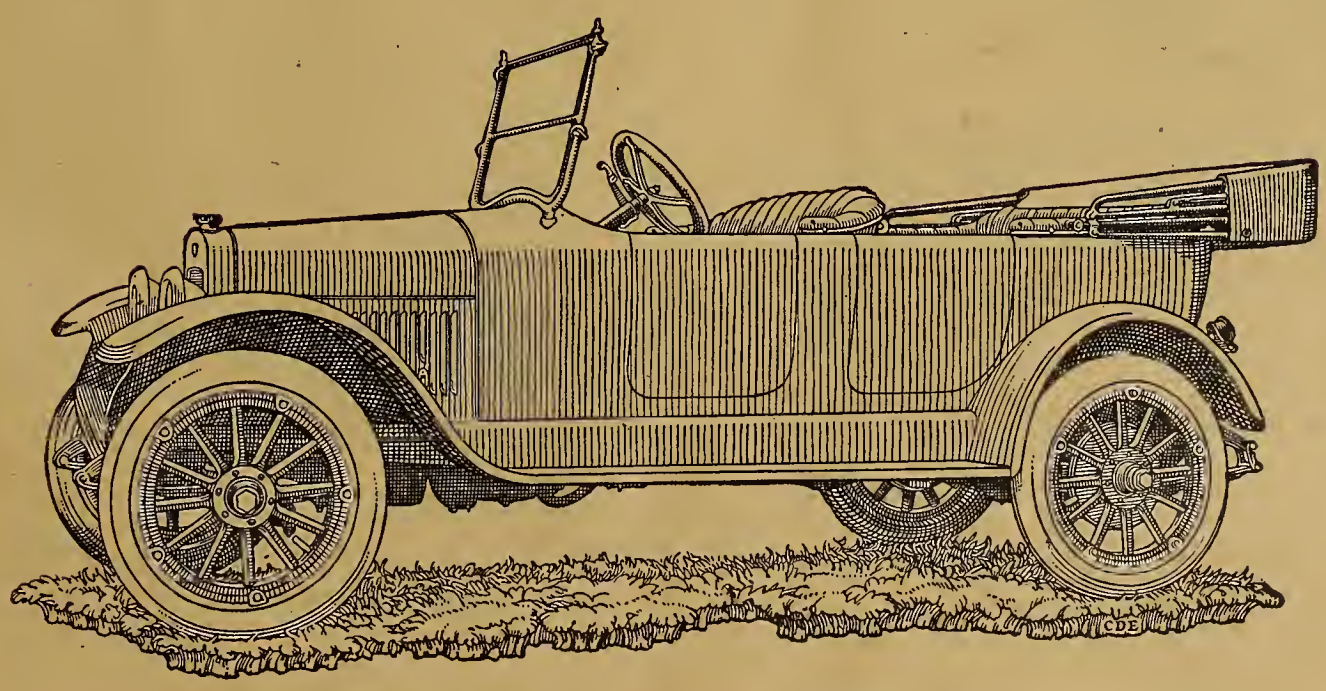
Thus the big staff of purchasing experts for Maxwell become your purchasing experts and the saving goes on to you in the price.

$985 is indeed a small sum to pay for a great value in a great car like Maxwell.

Maxwell

More miles per gallon
More miles on tires

MAXWELL MOTOR COMPANY, Inc.
DETROIT, MICHIGAN



Salisbury Axles are Standard



The New Salisbury Pressed Steel Rear Axle
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SALISBURY AXLES incorporate many improvements and betterments tried and proven by exhaustive engineering tests and practical use. Each Axle is submitted to careful factory test for strength and mechanical perfection before shipping.

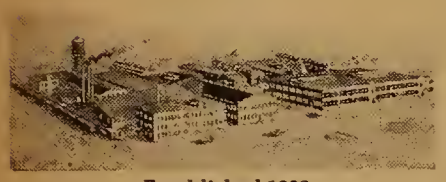
The various axle members are designed for accessibility, strength, simplicity of construction and are "fool proof" as far as possible. Pinion shaft bearings cannot be jammed by improper adjustment.

The mounting in the spiral ring gear "the Salisbury way" insures greater rigidity and perfect alignment.

The rear wheels fixed rigidly to the driving shaft by a steel flange bolted to the hubs hold steady against side strains through a wide spread of bearings and permits of easy accessibility to driving shafts.

This gives all the desirable features of the full floating type and the added advantages of the three quarter floating type.

Manufactured for Automobiles weighing 2600 to 3200 lbs.



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Users tell us that it is worth much more than the cost of ESSENKAY to have the *fear* of punctures *banished*—blowouts, slow leaks and expensive tire troubles made impossible. ESSENKAY users can ride without fear of nails, glass or sharp stones.



Over 100,000 users have proved the economy of ESSENKAY. They have invested over $4,500,000 in ESSENKAY—the Better-than-Air Tire Filler. ESSENKAY contains no rubber, but possesses practically all the desirable characteristics of rubber—*with none of its imperfections.*

Over 100,000 Users

Rides Like Air — **Essenkay** THE TIRE FILLER — Doubles Tire Mileage

Doubles Mileage

Tires filled with ESSENKAY are always at uniform pressure—cannot be deflated or run "flat". ESSENKAY forms a highly resilient riding cushion which fills casings completely—no inner tubes—no air. 10,000 to 20,000 miles on ESSENKAY is the rule, not the exception. When ESSENKAY filled tires are worn down to the last layer of fabric, the *same* ESSENKAY can be transferred to new casings. ESSENKAY is *guaranteed* against being affected by heat, cold, water, mud, sand, pressure, friction—hardening, crumbling or flattening.

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We will send ESSENKAY for Free Trial in your tires. Ride over smooth roads, then over the roughest you can find, including hilly and sandy country. Allow the car to remain under a maximum load on a concrete floor to prove that ESSENKAY does not flatten. Make any test you like. Then—if you are not convinced that ESSENKAY rides like air—that it will end your tire troubles—that you will no longer be bothered with punctures, blowouts and slow leaks—that ESSENKAY will not flatten, crumble or deteriorate—return it—*the test will cost you nothing.*

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Six Big Points to Study

[CONTINUED FROM PAGE 11]

not buy cotton land in Georgia. There is a fitness of lands for plants and for animals. It is not accident, it is lime and phosphorus that gives the Thoroughbreds in Kentucky; it is lack of these things that gives the little ponies of Chincoteague

"Second—What are the people in the region like? This is a very essential point. Men make or unmake communities (sometimes communities make or unmake men). I know an ideal community on hilltops in Maryland, every man an intelligent one, educated, working, reading, thinking, cooperating with his neighbors to upbuild all the region. I have nowhere in the world seen a finer neighborhood. Steadily the soils of these hilltops grow better because of the good men who live there. Not fifty miles away I can show you a land richer in soil but sunk in sloth, ignorance, and despair, the fields overgrown with briers, the homesteads tumbling into ruin. I would give a lot more for a farm in that hilltop community.

"Again, what are the people like as neighbors? Of course, they will all be neighbors, but are there enough of them near me that will be congenial, inspiring, helpful—the sort among whose children I would want my children to intermarry? I would not count a farm cheap enough at any price to tempt me to go and settle my children among people whose ideals are low, who read no books, who do not see the good current literature, whose sole thoughts are eating much, working, sleeping, and money.

"Third—What is the soil like? 'Oh, never mind the soil,' you say; 'soils are easily made.' True, and modern agricultural science clearly points the way. I admire your courage and your enthusiasm. I will be glad to help you, for I have watched a good many soil-building operations, some of which came to a happy conclusion.

"But before you buy let's consider how far away is the limestone that is to redeem this land. What will it cost you? Have you a constructive bent of mind, and a constructive pocketbook? What will it cost to buy this poor land, and how much more to buy good land? And is the land at $25 an acre cheaper than the land at $100 an acre, or is it dearer, fertility considered?

"The plain fact is that very poor land is not cheap as a gift, nor is rich land often valued too high.

"But why so much emphasis on mere soil fertility," you ask. Because civilization is based on soil fertility, and based, really, on the amount of carbonate of lime that is at hand with which to keep soils sweet. It means that in future the neighborhood will be intelligent, enterprising; will support roads and schools and ideals which your children will enjoy. I well recall how a friend and I crossed Kentucky by automobile with no road map, only a geological map of the State; and how we simply kept to the limestone and found always good roads and fine farms and good schoolhouses lining the way, while the moment we left the limestone and the rich soils—well, I can't go on here, it would not be courteous to do so. If the land has enough lime in it the fertility problem is simple, because the clovers grow easily, and clovers make soils rich. Then, too, grasses come so nicely, and naturally, and that prevents soil erosion on hill slopes, and a lot of troubles solve themselves.

"Fourth—What is the texture of that soil? Texture is a thing that the layman can easily understand. Soils range from gravels to putty—either extreme is bad. The soils with too coarse a texture are droughty, and cannot hold fertility well. The putty-like soils can only be worked nicely one day in the year, and on that day you may have gone on a picnic. Except for grass, and excepting limestone clays, dodge the putty-like soils. Walk over the land, if you can do so, in a wet time. Does the water stand over it in this sheets? Is it too water-tight to let water reach down to the tiles? If so, you can redeem it by aid of vegetable matter turned under in time. To make the open soils productive is far more quickly done. I repeat, though, if that dense clay is strongly impregnated with limestone, take it. You will have your cultural troubles, true; but what grasses it will grow! How clovers will riot in it! How alfalfa will stick! Of course it won't be a garden soil, but there's money in it.

"Perhaps there is need right here for expert advice as to whether a soil is of the right or the wrong kind. Let the soil itself tell you. Do grasses luxuriate along roadsides and in pastures? Or does the land lie naked or thinly covered with weeds? If it is lime-impregnated the grasses are there. Don't listen to the land seller when he says, 'The reason there is no grass here is that the farmers have been too lazy to sow it.' Grass is universal, the gift of God. It comes as surely as the sunshine if the soil is fit.

"Fifth—What is the subsoil? If it is a water-tight clay it means difficult drainage. If it is nicely pervious it saves you about $40 an acre in drainage problem. Sample the soil and the subsoil as you go; take along a little bottle of muriatic acid. It is inexpensive and innocent stuff and won't hurt your fingers. Test pebbles from the subsoil by pouring on a little acid. If they bubble, close the bargain quick before the owner suspects. That effervescence means that the subsoil is filled with carbonate of lime; if it doesn't bubble, the soil is lime-hungry.

"Sixth—Is there a water supply? Of course, if it is a dry farm you can provide wells and windmills and cisterns, but these cost money. If there are springs, if one of them will run by gravity to the house and barns, it is well, and should add at least $500, and perhaps several times that, to the value of the place.

"Seventh—Is there timber? Trees pay well in the form of fence posts, firewood, and so on, and immensely do they enrich country life. You can select a farm with fine trees if you will have a little patience in the search.

"Eighth—What of the house? Is it a true country house or not? A country house has sun, open fires, porches, a "homey" air. It has a lot big enough to make a lawn on, to plant old-fashioned tiger lilies and phlox and apples and cherries on. If it is a city house built in the country, costly to live in, needing a lot of servants and all that, buy it if you like—but none of it for me!

"Ninth—What is the road like? Roads are indexes of civilization. You can pretty well judge the neighbors by the road they have called 'good enough,' all their lives. True, one can allow a little here, for road improvement is coming fast. The road may improve soon after you have taken possession.

"Tenth—How far is it to the town or village you must visit? You will go to town at least a hundred times a year, maybe three times that often. Say we compare two miles distance with eight miles. In the one case you travel 400 miles a year in going to town; in the other case, 1,600 miles. To drive a horse the extra 1,200 miles will cost you, for time and horseflesh, how much? Reckon that in in considering the cost of the one farm with the other. It costs you at least 10 cents a mile, does it not, to drive to town? Well, $120 a year is five per cent interest on $2,400. So you can afford to pay that much more for a farm near town than for one that is eight miles away, if you need to visit the town often."

I have found the above list of questions mighty valuable and I hope it will prove so to you.

Rake Useful in Chicken House

I HAVE found that raking the grain fed to my chickens into the litter of the poultry house will keep the hens active scratching for it. The little extra time spent is well worth while, and a common garden rake will do the work. This same rake is useful for distributing evenly the litter which accumulates under the roosts. J. T. B.

Employer's Time

A PLUMBER and a painter were working in the same house. One morning the painter arrived late and the plumber said to him:

"You are late this morning."

"Yes," said the painter. "I had to stop and have my hair cut."

"You did not do it on your employer's time, did you?" said the plumber.

"Sure I did," said the painter; "it grew on his time."—*Exchange.*

DELCO-LIGHT

"Electricity for every Farm"

The Delco-Light engine is **valve-in-the-head** type—used in the best and most powerful airplane engines and in hundreds of thousands of automobiles.

It is air-cooled—runs on kerosene in any climate—has only one place to oil and has a simple mixing valve in place of carburetor.

The storage battery is exclusively designed and built for Delco-Light with thick plates, wood and rubber separators and many improvements that insure long life.

Delco-Light long ago passed the experimental stage and has gone through the refining influence of three and one-half years of production and of usage by 75,000 customers.

You will find plants in homes in your community. Just ask your neighbor about his Delco-Light plant.

Delco-Light makes happy homes; it saves time and labor, taking away lots of hard, unpleasant tasks. It "Pays for Itself" by the work it does and the time it saves.

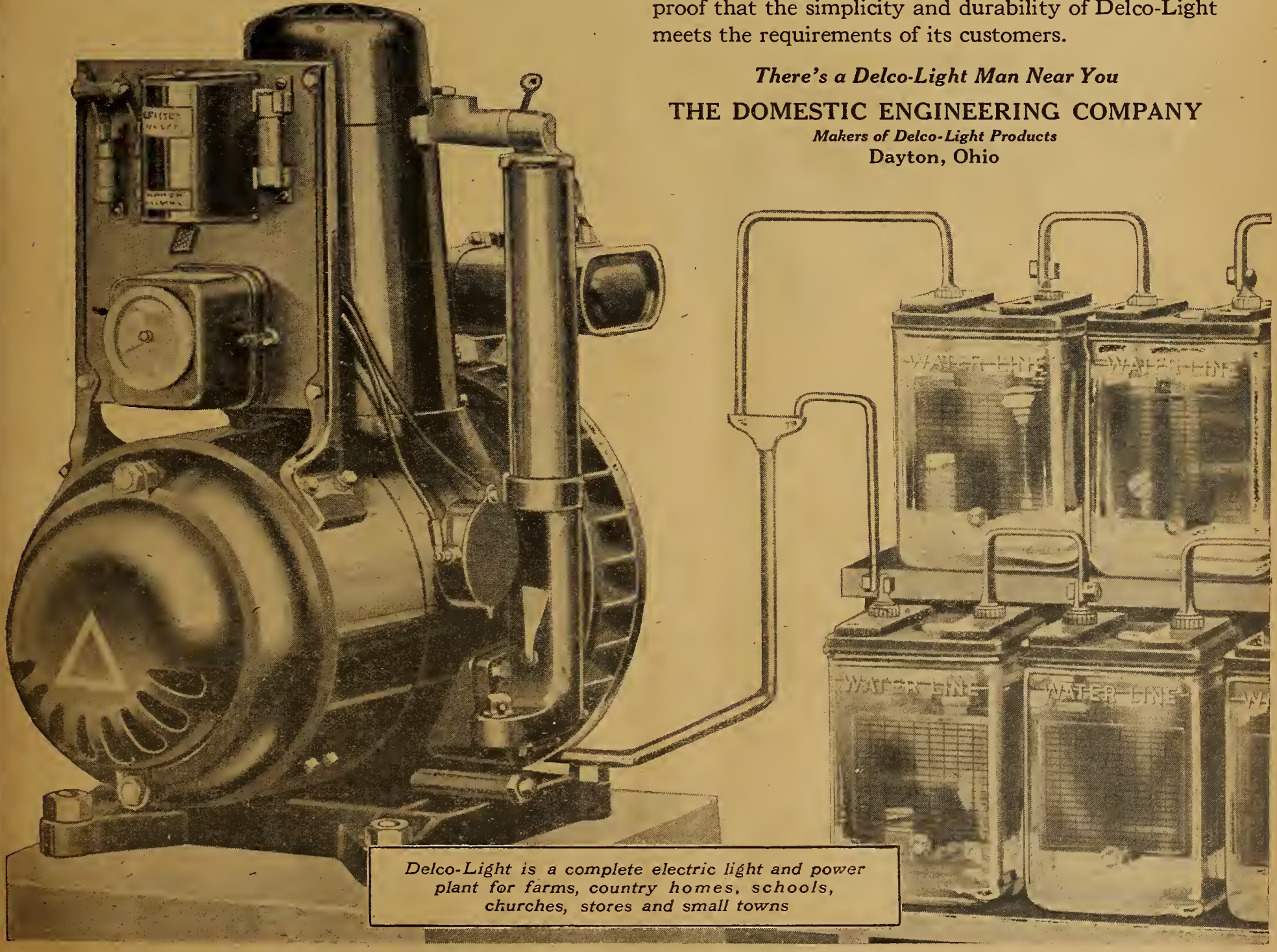
Of the more than 75,000 Satisfied Users of Delco-Light, the first are among the most enthusiastic—proof that the simplicity and durability of Delco-Light meets the requirements of its customers.

There's a Delco-Light Man Near You

THE DOMESTIC ENGINEERING COMPANY

Makers of Delco-Light Products

Dayton, Ohio



Delco-Light is a complete electric light and power plant for farms, country homes, schools, churches, stores and small towns

Champion

Dependable Priming Plugs



Equip Your Engine So It Sure-Fires When Cold

Champion Dependable Priming Plugs sure-fire cold motors because, with the priming cup right in the plug, the gasoline trickles down the core of the plug and drips from the sparking point where the spark jumps and is the hottest.

Every car can be easily equipped with these plugs in a few minutes.

Get a set of Champion Dependable Priming Plugs from your dealer, and insure easy starting in cold weather. Price $1.50 each.

Champion Spark Plug Company, Toledo, Ohio

Champion Spark Plug Co. of Canada, Limited, Windsor, Ontario

DEARBORN Trucks

5 Points of Superiority

1. Lighter Weight.
2. Longer Life.
3. Greater Speed.
4. Lower Running Cost.
5. Lower First Cost.



Here's the Farm Truck You Need

THE Dearborn Model BW 2-ton truck is the greatest investment ever made for the farmer. It is built to do hard steady work under all kinds of weather conditions. On rough going, on hurry calls to town the Dearborn gets there and back at the least expense of time and money.

Dearborn strength comes from special quality steel, and the elimination of unnecessary parts. That's why the Dearborn is from 500 to 2,000 pounds lighter than any other worm-driven truck.

This means less expense in every way and more power for the load. There's less gasoline, less oil, less tire cost, less upkeep on the Dearborn.

The Dearborn is the pioneer of the light-weight, strength-plus truck.

The Dearborn costs less by several hundred dollars to buy, and saves you money every minute of every hour of every day, every year you use it.

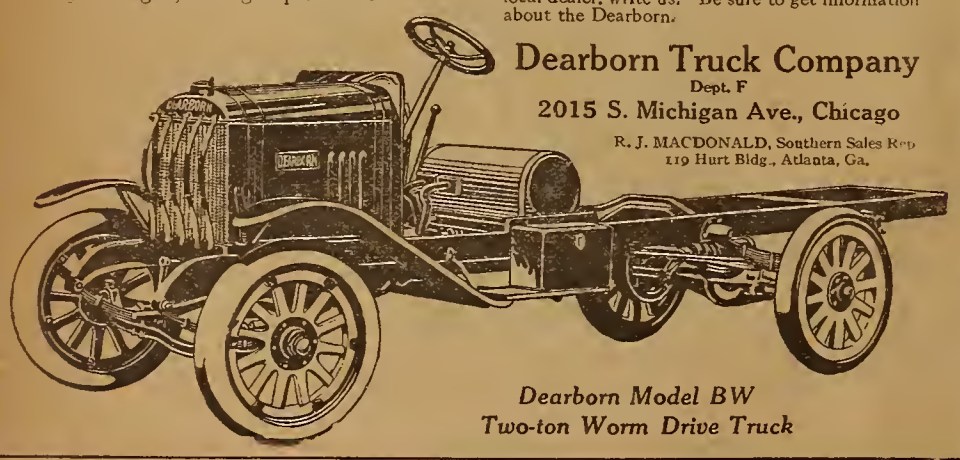
Dearborn working units are the world's standard. This insures you long life and dependability. The motor is a Buda—the transmission Grant-Lees—the rear axle Standard, and so on.

Pay From Profit Plan

You can't afford to run chances on a truck. Before you buy any truck at any time see the Dearborn Model BW. If you don't know our local dealer, write us. Be sure to get information about the Dearborn.

Dearborn Truck Company
Dept. F
2015 S. Michigan Ave., Chicago

R. J. MACDONALD, Southern Sales Rep
119 Hurt Bldg., Atlanta, Ga.



Dearborn Model BW
Two-ton Worm Drive Truck

Alpine Farmers Succeed in Spite of Difficulties

ONE would not think that these Alpine mountainous slopes would be suited for farming, but the Swiss are famed for their ability to make the most of what God has given them. Intensive farming of the fertile valleys and careful pasturing of the steep hillsides and the more level plateaus make it possible for them to rank among the greatest producers of dairy products in the world. Cattle-breeding and milk production head the list of Switzerland's agricultural industries, and their cheese and butter are known throughout the world.



An Alpine shepherd and his flock

Swiss farmers, numbering 207,523, own 1,615,893 cattle, over half being cows, and there are 1,076,388 head of other farm animals, of which 358,887 are goats. In the year 1914 these cattle produced 26,700,000 quintals of milk, and 1,000,000 quintals of milk were obtained from goats. (A quintal is 100 pounds. We didn't know ourselves until we looked it up.) About half of this milk is made into butter, worth respectively 222,000 francs, and cheese, worth 70,129,000 francs, which was exported principally to the United States, France, Germany, Austria, and Italy. (It takes five francs to make a dollar.)

The condensed milk industry is also highly developed, and 1,100,000 quintals were produced in 1914, nearly half of which was exported. Another dairy by-product is the Swiss chocolate, of which 80,000,000 quintals were manufactured in 1913.

This industry employs over 7,000 workmen, and is one of the most important in Switzerland.

From this prosperous little nation a lesson can be drawn which involves one of the most vital problems of agriculture. In spite of the lack of broad, fertile fields the above figures show that they are making the most of nature's endowments. They are realizing a maximum profit on their farming operations, and at the same time losing very little fertility from their soils. It does not pay as yet in this country to cultivate mountain lands, but there are plenty of level farms which are not being worked for all that is in them.

My, what a temptation it must be for the Swiss shepherd to sit and watch the clouds drift over the Alps!

The Queen of Autumn

By Lena C. Ahlers (Illinois)

THE chrysanthemum is truly the queen of autumn flowers, and no garden is complete without them. They bloom abundantly from September until killed by severe freezing, and if taken indoors will continue to flower until January. There are a great many varieties and colors. All are beautiful and quite easy to grow, but some are more adaptable for out-of-door culture, while others do better in pots. They will grow to perfection in any garden soil with plenty of water and sunshine, but will abundantly repay any extra care given them, as they are gross feeders, and if the ground is spaded deep and enriched with well-rotted manure they will grow rapidly and soon become large bushes. When treated thus, I find that the flowers will also be larger and more gorgeously colored.

Chrysanthemums may be propagated in three ways: Cuttings may be taken from a thrifty plant and inserted in rich soil. If plants are to be used, they should be set out in the ground about the same time tomato plants are put out. They may also be started from seed, which germinates easily, and will often bloom the first year if sown early in March. All professional growers use this method to obtain new varieties, but it is rather slower than other methods.

The class of "mums" known as exhibition or show include the Chinese, Japanese, and Ostrich Plume varieties, all of which are for indoor growing. My experience proves that plants or cuttings do best when put in pots six inches in diameter and given a thorough watering, then set away in a cool, shady place till started. The Pompon, Anemone, and Grandmother's Garden chrysanthemums are all hardy and do best planted out of doors. The plants that have been growing in the open ground may be lifted, if desired, and placed into pots and boxes for indoor blooming.

These plants should be lifted very carefully about the first of September, so as not to disturb the buds, drenched thoroughly, and set in a shady place until re-established. Chrysanthemums like a cool temperature, and will do best in a room that is kept only a little above the freezing point. When through flowering they may be taken to the cellar, where they will require very little attention except an occasional watering.

Soon after the chrysanthemums are set in the open ground they should be pinched back to make fine bushy plants. Some varieties will grow very "leggy" if this is not resorted to. If large flowers are desired, the plants must be disbudded. About the first of October a cluster of flower buds may be found on every stem. Remove all the buds, except the terminal ones—that is, the largest and strongest ones in the tips of the branches. This is the way the florists grow the large flowers that are the admiration and despair of every amateur grower. All plants grown for specimen and exhibition purposes should be fed frequently with liquid manure.

The single-flowering varieties are very graceful, and for artistic effect have no rival in the flower kingdom. The Pompon sorts are entirely hardy, and endure the coldest winters without protection. The flowers are small and round, resembling miniature roses. They are the most beautifully colored of all chrysanthemums, and give satisfaction wherever grown.

Sometimes little black and green flies trouble young chrysanthemums and devour the young shoots. These pests may be kept in check by dusting the plants with tobacco powder.

The Thing You Want

[CONTINUED FROM PAGE 7]

would most probably have been ignored.

Your neighbor of course is not any smarter than you are. He probably is not a whit more original, maybe not as much, for that matter. But then there are several hundred neighbors, and there is only one of you. Each neighbor is trying out things you have not tried out, and is getting suggestions from people that you have not got suggestions from. Your immediate neighbors, therefore, have the biggest fund of information about the agriculture of your neighborhood that there is to be found anywhere. They are, in a sense, working for you. I know case after case where whole communities have been remade by one man getting an important idea and putting it to work. The other men around copied what he had done, and from time to time improved on methods.

The eastern shore of Maryland has been remade in the last twelve years by the general introduction of crimson clover and other winter cover crops. At first this plant was grown as an ornament. Later one farmer grew it in his fields, and found that it more than doubled the corn crop which followed. His neighbor copied his idea, and so it spread through the region. It might have spread a deal faster than it did had everybody in a community been alert to observe what was going on around him.

In a trip down the Atlantic Coast last year I was interested in noting the wonderful development of the new bright tobacco belt in the upper coastal plain country. Thirty or forty million dollars' worth of tobacco is produced in this part of the Carolinas, where practically none was grown twenty years ago. It fits in with cotton-farming to fill up slack labor periods and better round out the farm business. I was further interested in learning how this business had sprung up. I learned that it all came through one man here and there finding that tobacco-growing was profitable, and his neighbors, with their eyes open to what was going on, copying this success.

I found other areas devoted largely to the growing of strawberries, and learned that they had developed in the same way. There was another large area in which the fill-in crop was cantaloupes. Ten years ago one man conceived the idea of growing these melons commercially. It proved highly profitable. Pretty soon his neighbors began to copy. One little station last year shipped out over 600 carloads of these melons.

There is no way of telling how many community-remaking ideas have been worked up on a farm and have *not* been copied by the neighbors. I am of the opinion, though, that these neglected results are far more numerous and important around you and me than those which have survived and proved of such value, and I think this field of agricultural uplift holds out the most returns for the least effort and output of any scheme of betterment I know of.

A Short Cut to the Pump

By George Russell

WITH our windmill fully a quarter mile from the farm buildings, a lot of walking was necessary to start and stop it. Finally I rigged up a step saver.

I set strong poles, 10 feet high, 50 yards apart between the windmill and main barn, and put a heavy screw eye in the top of each pole. A No. 9 wire was attached to



the starting lever of the mill, the wire then going through a pulley fastened to the mill tower, thence through each screw eye in the poles to the barn, where it passed through another pulley fastened to one corner, and finally was attached to a lever. One more improvement needed to make it work perfectly was a short piece of wire fastened to the main wire at the mill, which was passed through a pulley, and a weight attached heavy enough to take up the slack and keep the wire taut. Short pieces of round link chain where the wire passes through the pulleys prevent friction and the wire from catching.



EACH year's output from the Dietz Factories would place a line of Lanterns, fifty feet apart, entirely around the world.

Just think of it! How is such a tremendous sale of one make of Lanterns possible?

Simply because the many millions of people who must use lanterns know what they want—The Best They Can Get For The Money—and most of them choose a "Dietz".

If your Lanterns are becoming the worse for wear, ask your dealer to show you a Dietz No. 2 Wizard Lantern. Let him explain the Cold Blast Combustion System, which makes this Lantern give a more powerful and whiter light and keeps the light immune from blow-out in heavy wind and storm.

DIETZ LANTERNS FOR THE FARM

Hand Lanterns Wagon and Driving Lanterns Wall Lanterns Motor Truck Lamps

R. E. DIETZ COMPANY
NEW YORK CITY
Largest Makers of Lanterns in the World
FOUNDED 1840

Make Money All Winter

Pull out stumps and get all the virgin land at work making money for you. It's the best land you have. Work can be done in Winter and early Spring. Stumps pulled at 3c to 5c each. An acre or more a day.

Hercules
Triple Power
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Find out all about it by sending for the big book at once. See the proofs we offer. Get the special low price proposition we are making. Address
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Right in your own neighborhood. You need only to let it be known that you are a **Rahe Trained** Motor Mechanic, and you will get into a good paying business at once. We refer you to thousands of successful Rahe graduates—many in your own section.

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Any man, 16 years of age and over, can learn here by daily practice on the greatest mass of Automobile and Farm Tractor equipment ever used for training purposes. Same **Method of Practical Training** as used to train thousands of Soldier Mechanics, in 60-day Courses. We train you, regardless of education or previous experience. (No colored applications.)

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Spread Manure All Winter Long

If you want to save time and money and put an end, once and for all, to the dirty, disagreeable job of old-fashioned hand methods of manuring—

If you want to utilize to the very best advantage every scrap of manure that your stock produces—

If you want the manure spreader that is built stronger, lasts longer, shreds the manure finer, and spreads it wider and more evenly—

You Want The NEW IDEA

See your dealer now and get the facts in full. Plan to make your NEW IDEA pay for itself between now and spring. You can—easily—by spreading every week through all the winter. *Spread right over the snow!* Good results will be sure to follow.

The NEW IDEA is built low down; easy to load. And because of its light draft, you can heap it 30 inches high and still have a light haul for your team. There are dozens of big, important, patented features that make this the best machine for your needs. For instance, note that it has no gears to break in cold weather. The chain sprocket wheel drive saves wear and gives you control, right at the seat, to spread any quantity desired—3, 6, 9, 12, or 15 loads to the acre.

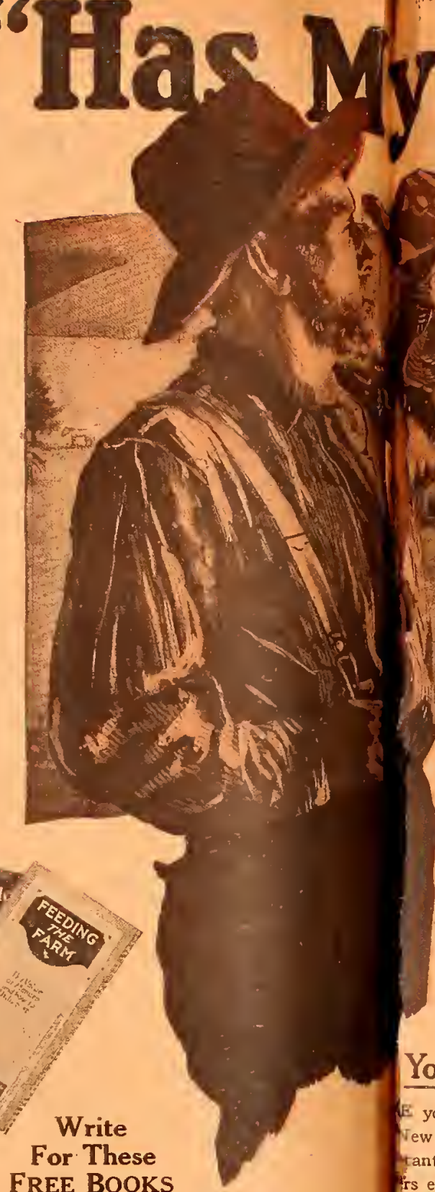
NEW IDEA Dealers Everywhere

Every red spot on this map represents the location of a NEW IDEA Branch or Distributor where both spreaders and repair parts are carried in stock.



Little Rock, Ark.	Des Moines, Iowa	St. Louis, Mo.	Greenville, Pa.
Los Angeles, Cal.	Waterloo, Iowa	Helena, Mont.	Harrisburg, Pa.
San Francisco, Cal.	Louisville, Ky.	Omaha, Neb.	Pittsburgh, Pa.
Denver, Colo.	New Orleans, La.	Fargo, N. D.	Sioux Falls, S. D.
Atlanta, Ga.	Shreveport, La.	LeRoy, N. Y.	Knoxville, Tenn.
Cottonwood, Ida.	Portland, Me.	Poughkeepsie, N. Y.	Memphis, Tenn.
Pocatello, Ida.	Baltimore, Md.	Watertown, N. Y.	Dallas, Tex.
Chicago, Ill.	Jackson, Mich.	Columbus, Ohio	Houston, Tex.
Peoria, Ill.	Traverse City, Mich.	Mansfield, Ohio	San Antonio, Tex.
Indianapolis, Ind.	Minneapolis, Minn.	Toledo, Ohio	Orange, Va.
Vincennes, Ind.	Kansas City, Mo.	Portland, Ore.	Seattle, Wash.
	Green Bay, Wis.	Milwaukee, Wis.	

"Has My Land Been Worthy of Its Hire?"





Have you always worked your land, or has it worked for you? Has its fertility, its power to produce, dropped steadily down, or has it held its own and perhaps even gained?

IF your land has been worthy of its hire, then pay up your debt to your soil. ***Perpetuate*** its prosperity—and yours. ***Treat it right.*** Begin now, and continue throughout the winter, to spread manure direct from the stable onto your fields. For your land, drained by successive croppings, cannot possibly keep on feeding unless, in turn, it is fed.

Haphazard manuring and poor production invariably go hand in hand. Manure piles leaching away the best of their valuable plant food through a winter's wasting; wagon-tail distribution—where manure is scattered about unevenly by hand, over-feeding some portions of soil and allowing others to starve—hit-or-miss methods such as these invite scanty crops and soil starvation.

Figures have been compiled through years of accurate tests which demonstrate conclusively the wonderful value of scientific manure spreading. They cover every possible crop, climate and soil. Talk it over with your County Agent or Experiment Station Man, or consult any other authority. All will tell you that it does pay enormous returns—returns so big that their actual dollar value for one season alone is worth far more than the cost of a NEW IDEA.

NEW IDEA
Registered U.S. Pat. Off.
The Original Wide Spreading Spreader
(Known as "NISCO" in the West)

Write For These FREE BOOKS

Every farmer who is interested in increasing the fertility of his soil will find these two booklets well worth having. The catalog shows you the many features that make NEW IDEA the machine you need. "Feeding the Farm" is a recognized authority on manure and the right way to handle and spread it. It gives you many helpful ideas on improving the texture and fertility of your land.

What Will Become of the Stra

As a fertilizer alone, your straw is worth $8 a ton. In addition, it is the greatest builder of humus you can put on your soil.

Straw, spread properly, about 2 tons to the acre, is the finest prevention against winter killing of wheat, soil blow, or washing. It keeps snow from drifting, holds moisture in the ground and makes your soil warmer and more friable.

Your Dealer Will Show You

E your New Idea dealer. Ask him for visible proof of New Idea superiority. He will point out the many vitally tant features that make this spreader the big choice of rs everywhere. Talk to him today. It will mean big-profits for you next year. If you don't know who the t New Idea dealer is, write to us direct. We will send 's name along with a copy of our absorbingly interesting t, "Feeding the Farm."

New Idea Straw Spreading Attachment

"Two Machines in One"

At mighty small cost you can get this attachment for your new machine or old. Handles a big load, shredding the straw fine, and spreading it evenly, 8 to 10 feet wide. With this simple attachment, you almost double your spreading profits.

Few Parts

The Straw Spreading Attachment consists of two framed sides which rest on the sides of the regular spreader—an upper, or third cylinder with a chain to connect it with the upper cylinder of the manure spreader—and plates to hold the cylinder frame in place.

A metal shield around the ends of the topmost cylinder prevents straw from catching in the shaft.

You Need This Machine

If you already have a NEW IDEA, get the Straw Spreader Attachment and put it on—you can do it yourself in 15 minutes. And if you haven't a manure spreader, get the original wide-spreading NEW IDEA combination for spreading both straw and manure.

n Our Billion Bushel Wheat Crop?

on't Burn Your Straw

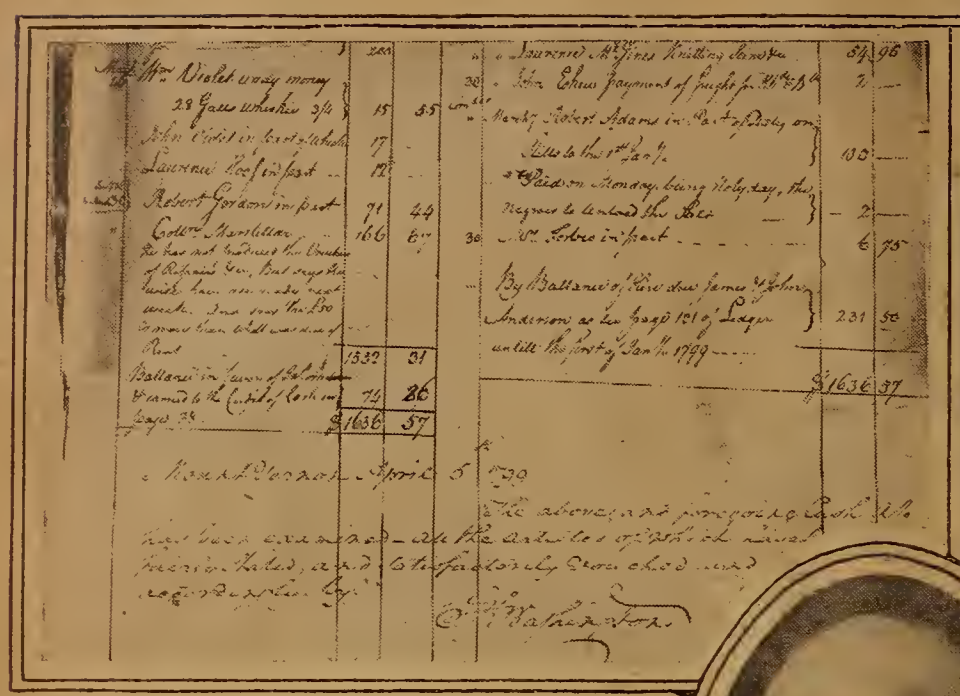
your straw this fall and see how your rains thrive. Stack only what you your live stock. Don't burn your nd don't let it rot. Forget the hought that burning is the way to veeds. Even if it was, the price you rohibitive. Either way, you rob your your pocketbook—and damage the for months to come, on which your ack stood.



NEW IDEA SPREADER CO.
COLDWATER, OHIO

"Spreader Specialists"

Liars

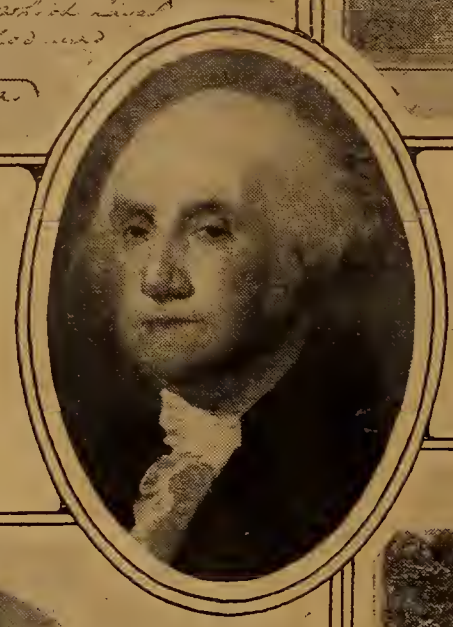


WE HATE to say anything against George—considering the cherry tree and everything—but you can figure for yourself that he was dead wrong sometimes in his estimates. We wouldn't go so far as to say that George deliberately lied—maybe he was only trying to hold out ten bucks on Martha. If you don't believe it, here are his accounts in his own handwriting, and you can add them up on your own machine. This is hard on history, but we had to do it.



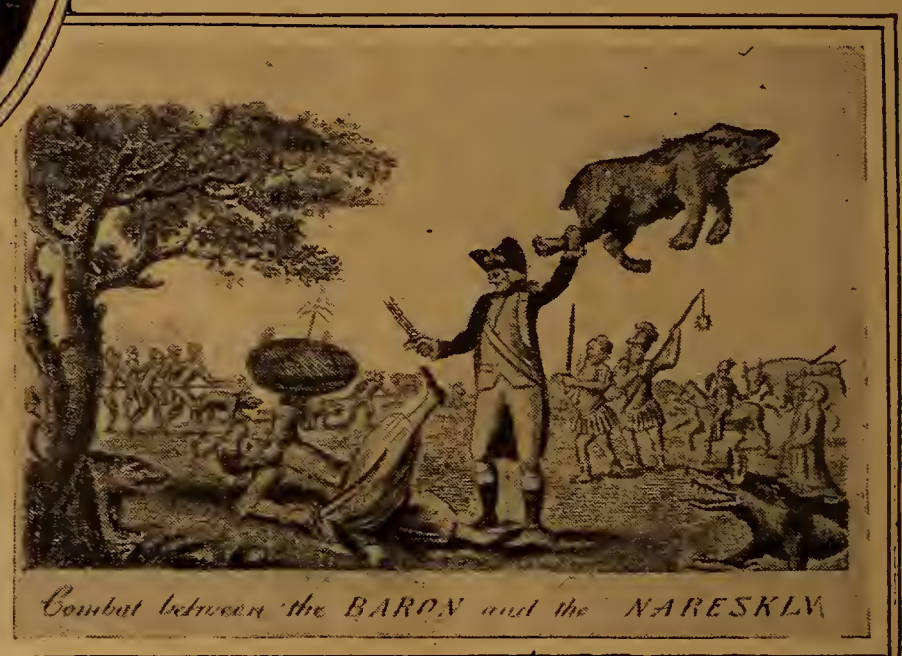
The Death of Ananias. *Acts Chap V*

AND here is dear old Ananias, the world's first thoroughgoing liar. You recall that, according to The Acts, the apostles and their followers agreed to combine their belongings and share alike. Ananias and Sapphira, his wife, forgot to turn in all the money they owned from their land, meaning to make themselves more comfortable than their neighbors. They lied about it, and as a reward were stricken dead. Gosh, what would happen to our population if all liars got the same dose!





FRANK BACON has been learning to be a liar all his life. He got so good they brought him to New York and put him in a show on Broadway, so he could exhibit his lying prowess to audiences, and make them pay three dollars a seat to hear him do it. He studied in poverty for forty years to perfect his great lying village character of "Lightnin' Bill" Jones, in his own play, "Lightnin'." A few months ago no one had ever heard of Bacon. To-day he is famous. Motto: If you must be a liar, be a good one.



Combat between the BARON and the NARESKIN

BARON Earl Friederich Hieronymous von Münchhausen wasn't really such a liar as you might think. He was a German soldier in Russian service against the Turks in the middle seventies. It was E. R. Raspe, an Englishman, who wrote "Baron Münchhausen's Narrative of his Marvelous Travels and Campaigns in Russia." The adventures were awful lies. The picture shows our valiant baron in "bear"-handed encounter. Having put his hand down the bear's throat and torn out his tongue, the hero is now using its still living carcass as a sledge hammer to beat the enemy into submission.



AND here's that famous Winsted, Connecticut, liar, Lou Stone. His regular job is city editor of the "Winsted Evening Citizen." All he makes from the lies he writes under a Winsted date line is clear velvet. He's to blame for the story about the bald man who painted a spider on his head to keep the flies away, and of the stem-winding watch swallowed by a cow and kept running in her stomach for five years. He explained that every time the cow breathed the muscular action wound the watch a little. Just think of a man earning a living breaking one of the Ten Commandments!



PAUL M. FELTON, movie cartoonist of Wilkesbarre, Pennsylvania, can prove to you that there is no force of gravity. He makes gentlemen row up steep waterfalls as well as down. His visual prevarications know no bounds. But it's a hard job. You see in this picture how a motion-picture cartoonist has to work. He has to draw sixteen pictures for every foot of film. "Whoever tells you there is easy money in being a movie cartoonist deserves a place on this page with the other liars," says Paul.

Rolling Stones



Photo by Brown Bros.

CONTRARY to the adage, the business of the rolling stones on this pago is to gather moss—not to mention beasts and birds and the fishes of the sea. Mr. Charles William Beebe traveled almost without a Baedeker, because there isn't one on the jungles of eastern Nepal, where Mr. Beebe sought for Tragepan pheasants. As curator of birds for the New York Zoological Park, Mr. Beebe journeyed to India, Ceylon, Himalayas, and Borneo, with a complete laboratory outfit and a large box of quinine. While at Kalacoon, in British Guiana, Mr. Beebe feasted sumptuously on tinamon and agoutis. Well, we don't know. We have lunched at an Armenian restaurant on things that read worse than that.

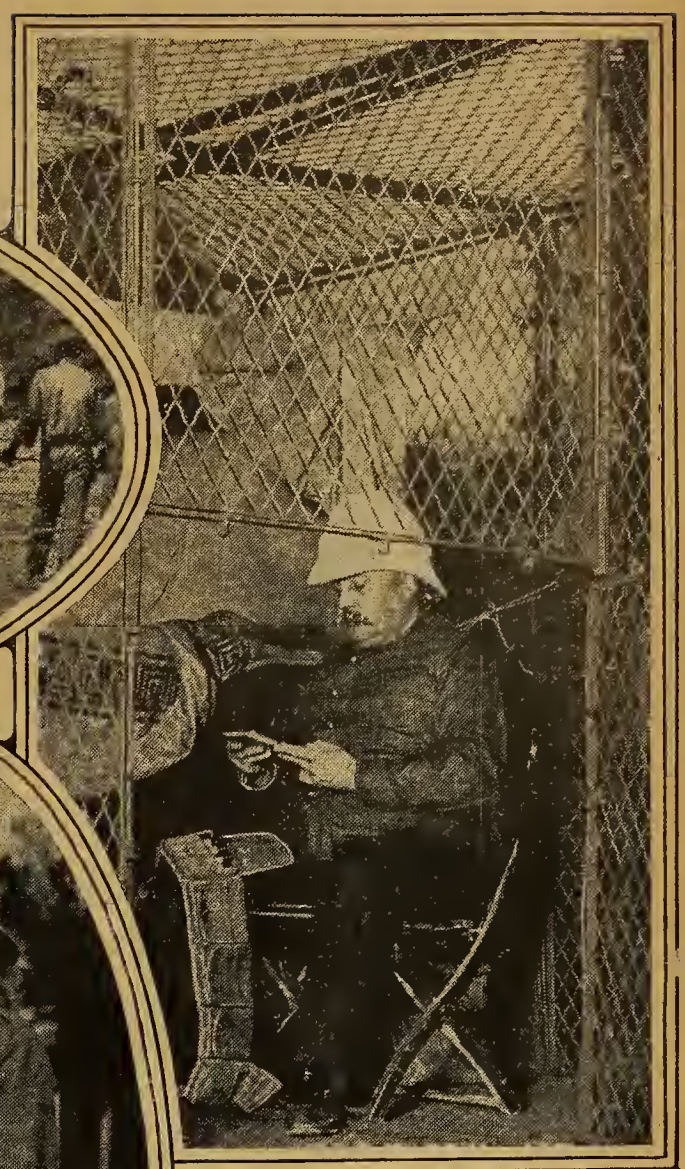


Photo by Brown Bros.

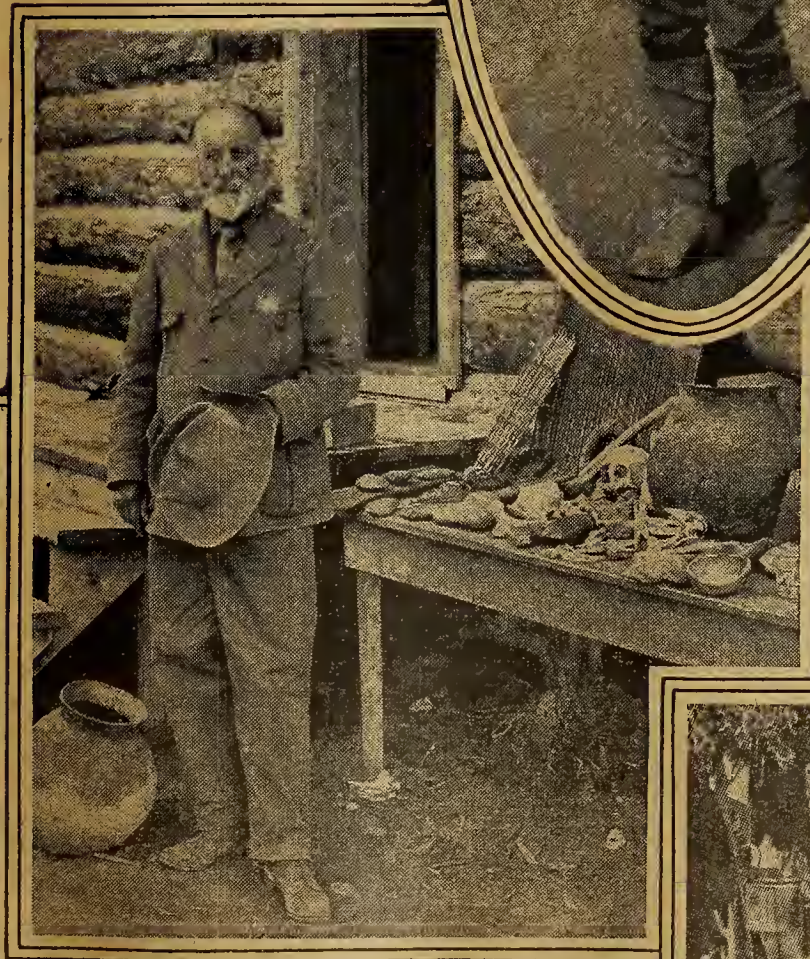
MR. J. ALDEN LORING is probably our most strenuous traveler. To prove this, he was eleven months in British and German Africa with Roosevelt, elephant hunting. While curator of mammals at the Bronx Zoo, New York, Mr. Loring went to Alaska to collect white sheep, moose, and caribou. According to the U. S. National Museum, Mr. Loring has the highest record as a traveling collector, for during a three months' trip he sent back nine hundred specimens of mammal.



Photo by Brown Bros.

JUST because a man is seventy Dr. R. L. Garner doesn't believe he should retire to his steam radiator and "Thanatopsis." At that tender age the doctor started on his seventh mission to the French Congo to study the language of the chimpanzee. Having trained twenty-six chimpanzees and twelve gorillas, Dr. Garner ought to know whereof he speaks when he says they do. In fact, he has even taken phonographic records of the monkey language. This photograph shows Dr. Garner having an "at home" in the jungle.

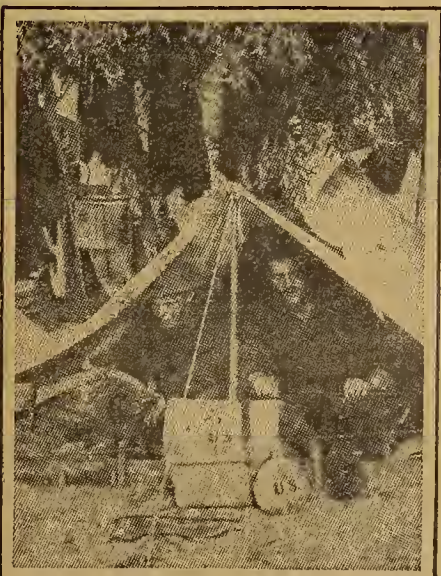
JAMES WILLARD SCHULTZ was born in New England, but he went West in the seventies, and promptly forgot all about codfish balls and town meetings. Out in Montana he endeared himself to the Blackfoot Tribe, and got adopted. Later he married Nat-ah-ki, and wrote "Blackfeet Tales of Glacier National Park," which contains stories of his mother-in-law and other relatives. In the picture we see Mr. Schultz fortified against Thanksgiving Day—several months after the passing of Mr. Hoover.





THE job of Dr. Jesse Walter Fewkes of Smithsonian Institute is mobilizing stones that started rolling about 1900 B. C. On the table are some trophies rescued from the buried city at Casa Grande, Arizona. Being adaptable, Dr. Fewkes can joke with the Zuni people in colloquial Zunese, and he is received in the highest priced Hepi apartment houses. Somewhere he discovered that the Cappadocians originated the skyscraper. However, the highest Cappadocian was a "cone house" of only nine stories.

MAJOR E. S. O'REILLY succumbed early to the "curse of the meandering foot." At seventeen he enlisted for service during the Spanish-American War. Since then he has served as an officer under four different flags—the Philippine, Chinese, Venezuelan, and Mexican. Still he doesn't recommend wandering as a profession. "The rolling stone," he says, "pays the price of his freedom in hardships and loneliness." Major O'Reilly has been other than a soldier. He taught school in Japan, was a police corporal in China, a reporter in Chicago, and a book agent in Kansas. While an officer in the Chinese army, Major O'Reilly concluded that if China ever had a good meal she could clean up the whole world—including Ireland.



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The Pell Street Rejuvenator

By Joseph Ernest

IN EXPLANATION of the presence of Jonathan Potter in Chinatown, alone and at a late hour, it should be understood that he had discovered the place by accident after some hours of entirely aimless wandering. Pell Street thrilled him with its darkling mystery, and there was something in the lines of painted exotic lanterns and the sound of hidden gongs that he found solacing and grateful.

He had been suffering acutely from too much Piddock. He had found, in fact, that Piddock was finally and definitely insufferable; and in order to spare himself the further society of Piddock he had bidden good night at an ostentatiously early hour to the dearest, sweetest, cleverest woman in the world. Piddock was rich; he was handsome after the fashion of a Greek god modeled in wax; he sang a pretty contralto; and he played the mandolin. Any of these things Mr. Potter might have forgiven him, if only Piddock had not chosen, in aggravation of his other enormities, to be still young.

It was Jonathan Potter's fortieth birthday, and he feared he was getting old. The subsequent contemplation of Piddock had strengthened his fear into gloomy conviction. If he had happened to pass a sufficiently inviting and comfortable lethal chamber, the odds are that he would have dropped in.

As chance fell, however, it was the much more cheerful establishment of Mr. Wash Jin that attracted his attention. He was momentarily coveting a fine piece of crackleware in the window, when he observed that the Celestial proprietor inside was behaving in an unusual manner.

While Potter watched, Mr. Wash Jin dropped a solid ivory ball into a black inlaid box, and shut the lid. Then he crushed the box into a handful of splinters, and ascertained with satisfaction that the ball had disappeared. Finally he reconstructed the box in the twinkling of an eye, inlay work included, and produced from it, not the ball, but a curiously shaped green bottle.

The colored lanterns, the whispering music, the throbbing of mysterious gongs in the gloomy tenements, the slant-eyed sinister beings that slunk past him on noiseless feet, combined to excite Jonathan Potter to a mood of adventure. He grasped his umbrella firmly in the middle and entered the shop.

Mr. Wash Jin's smile assumed the large caliber reserved for customers of obvious prosperity and patent embarrassment.

"You wanchee?" he said. He used pidgin English in business, on account of the distinct advantage it gave him over the uninitiated.

"Wanchee crackle jar in window," said Mr. Potter, nervously wondering whether he had got the correct accent.

"All lightee," said Wash Jin.

He touched a flower vase on his way to the window, a glorious example of blue porcelain; and in the twinkling of an eye it became wonderfully filled with sweet pink blossoms. The magic black box lay near it. Affecting to smell the blooms, Mr. Potter examined its construction.

It appeared to be solid. Inside was the green bottle which Wash Jin had seemed to create out of thin air. It also was solid enough. It was filled, moreover, with some milky liquid, and engraved on the outside with Chinese characters in gold.

Wash Jin reappeared with the crackleware jar.

"Ten dollee," he observed affably.

"What's this?" demanded Potter, holding up the small bottle.

Wash Jin took it from him with gentle insistence and placed it definitely back in its box.

"Not fol you," he said. "Makee lil josswork. Him," he added, indicating the bottle, "belong makee young."

"Makee young?" repeated Potter, secretly thrilling. "How muchee?"

"No, no!" Wash Jin's sleek head shook vigorously. "No wanchee sell!"

"Why in Sam Hillee?" demanded Potter, in disgust. "Well, I guess I'll take the jar." He added, as an after-thought, "Allee same."

"Ten dollee," observed Wash Jin once more.

He took the bill, inspected it with care, and departed into the rear of the shop to pack the jar. On the way he produced from the atmosphere two bowls full of goldfish, laying them aside as if they embarrassed him. At the same time a carved dragon at the rear of the store flashed green beams from its eyes and opened its maw to disclose a fiery crinkled tongue.

This final episode probably completed the disturbance of Mr. Potter's usually sober judgment.

"Makee young!" he thought, and picked up the greenish bottle again with eager interest. The Chinese had so many secrets—age-old secrets that they jealously guarded from the prying foreign devil. It might be—!

He saw himself in a polished brass mirror, a little slack in the shoulders, quite certainly a little convex in the waistline, weary-eyed, graying, with a mouth that dropped beneath his scrubby mustache. He contrasted his somber presence with the juvenile exuberance of Piddock.

The thought of Piddock electrified him into action. Wash Jin was safely hidden behind the stacked profuse merchandise. Mr. Potter thrust the green bottle into his vest pocket, grabbed his umbrella, and slipped on tiptoe into the street. In a moment he had rounded a shadowy corner; in two he was rapidly traversing Park Row in the general direction of the White Mountains.

All the way up-town the bottle seemed to be burning a hole in his pocket, and he sickened with dread at the sight of a policeman. But once safely inside his apartment the feeling of fear gave place to wildest hopes.

To be young again! Any risk seemed worth while to win back youth.

"Here goes!" said Mr. Potter aloud; and, leaping upon the green bottle, he tore out the stopper and drank.

The milky fluid was infernally hot stuff. He threw the empty bottle under the sofa and sank into a chair, making wry faces and gasping. Thereafter for a long time he lay still, with closed eyes—to open them sleepily at length and emit a sigh of utter beatitude.

"No' bad dope," he murmured. "Hic! Purrigood at that!"

And he slept in the chair in his shirt sleeves.

The Jonathan Potter who awoke next morning, three hours earlier than had been his wont, not only felt a new being—he was quite astonishingly new. His bath, which had often caused him a shudder of disgust, was a sparkling delight. He squared his shoulders strenuously in dressing, and diminished thereby almost to vanishing point the telltale rotundity below. He dug out a pair of Indian clubs from a box room, wiped from them the dust of years, and put in fifteen minutes' exercise before an open window.

He breakfasted on ambrosia. The player-piano in the next flat was stamping out a metallic ragtime, but he did not curse it any more. On the contrary, the tin-pan tune made him tap his feet and wag his head, added a flavor to his bacon and almost a "university tip" to his morning paper.

Between the moment when he assumed his hat and coat, and the time for opening his office, there was an interval of two hours. On the way down-town he bought an elaborate hair trim and face massage, a plaid spring coat, a suit of checks with cuffs on the arms and a collar to the waistcoat, some examples of the youthful collar at the moment, and a tie in diagonal stripes.

Jonathan also bought an ebony cane with a plaited silver mount—smart without being savage, as the clerk assured him.

Throughout an hour's energetic sifting of mail at the office of Dean & Everhard, manufacturers of filing systems, Potter's hand wandered from time to time to the scrubby growth on his upper lip. After he had captured a miraculously early stenographer his eye snapped with sudden determination. He dictated to her a number of curt letters to the salesmen, giving them drastic changes of territory. The list of these changes had been in his desk for months. He had sighed over it from time to time and had hidden it away, fearing that it would excite a successful rebellion against him. In his new and fiery youth it seemed his first and most obvious duty to take the risk.

Then he decided to take a walk in the sunlight until the salesmen arrived and his notes had time to sink in.

Before he had walked two blocks, temptation seized and whirled him once more into a barber's chair. A minute later his humble brown mustache was one with Ninevah and Tyre.

"Mucha better look without heem," commented the barber. "Haluva lot more yo'ng!"

"But I am young," Potter chuckled. "Man, I feel like a two-year-old!"

"Eet ees da spreenga-time," said the barber. "Ev-body feela more yo'ng."

Which was possibly true; but the rejuvenation of Jonathan Potter became of a quality verging on the sensational. He had long trembled at the idea of revolt among the salesmen. Month after month he had faced Everhard over the sales statements with a frozen sensation arising from his feet and playing about his shoulder blades.

But now he sailed up the elevator shaft into the thick of trouble, joyously whistling. He wasn't going to wait for events; he was going to start them himself.

The salesmen's room was buzzing like a hornet's nest as he approached. The voice of Billy Simms, who had long enjoyed the fattest part of the down-town territory, was raised in injured indignation.

"You all know me for a good-tempered guy if I'm let alone," Billy was saying. "But this thing is too raw. He can't hand me a deal like that without talking it out higher up. I'll scare the poor, sleepy old stiff out of his shoes. Boys, keep your ears open and you'll hear something drop!"

Unfortunately for Billy Simms, he chose that moment to adjust a shoe tie. He had been standing beside the sales manager's desk, rehearsing a menacing attitude; but his pose when Jonathan Potter entered, far from being menacing, showed what might be described as an almost abject lack of preparedness.

Billy Simms was a portly man and well favored. Potter carried his newly acquired cane. What the boys did actually hear was a sound resembling that of a blow on a well-upholstered sofa; but it was a sound with a special and distinctive quality that, in combination with Billy's roar of protest, might have set the spectators on Olympus rocking with laughter, as well as those at the adjacent desks.

"Billy, old scout," said the sales manager in a voice that was unfamiliarly breezy, "you're everlastingly fixing your shoe ties. Why not get out and hustle up some orders instead?"

Simms had come to rest at a distance of several yards, constituting a creditable broad jump for a man of his figure. When he turned to confront the spectacle of the metamorphosed Jonathan Potter, the only thing he let drop was his jaw.

"Why, say!" he stammered. "About that new route, you know. You ain't going to spring it on me like that!"

"But I am, though!"

Potter, bustling, flung a couple of paper weights about his desk. They were of cast steel, in generous sizes, and fell with the nerve-shattering effect of pistol shots.

"If there's anything that isn't quite clear," he added, "I'm here to explain it."

"I don't see what I done to deserve it," protested Simms faintly. "My sales are keeping up all right."

"Done?" Potter laughed genially and picked up one of the paper weights, which he flourished to assist his remarks. "I'll tell you what you've done, Billy. You've grown slack and [CONTINUED ON PAGE 44]



The Tree

By Joyce Kilmer

I THINK that I shall never see
A poem lovely as a tree.

A tree whose hungry mouth is prest
Against the earth's sweet flowing breast.

A tree that looks at God all day
And lifts her leafy arms to pray.

A tree that may in summer wear
A nest of robins in her hair;

Upon whose bosom snow has lain;
Who intimately lives with the rain.

Poems are made by fools like me,
But only God can make a tree.

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How One Rural Teacher Prepared Healthful Lunches for Her Pupils

By Zoë Hartman

WHAT teacher of a rural district has not looked upon the cold lunches her pupils must eat every noon with distaste and misgiving, and wondered if anything could ever be done to improve conditions?

A young woman teaching in one of the rural schools of Illinois, more courageous and resourceful than the rest, has solved the problem as far as her own school is concerned. As her methods are simple and easily imitated, they are hereby set forth for the benefit of any other rural "schoolma'am," or for trustees or patrons who have become impressed with the menace of malnutrition among school children.

Miss Marvin presides over a typical one-room country school, with four grades and an attendance varying from fifteen to twenty-one pupils, all of whom live from one to two miles from the schoolhouse and must bring their lunches. As in many such schools, a number of these pupils come from large families, in which the mothers are burdened with the cares of their broods and with farm work, and have little time for preparing tempting or even appetizing lunches. A few thick slices of bread soaked in syrup formed the basis of the child's noon meal—before this teacher began her experiment. Usually the mothers are not well versed in matters of diet, so they do not realize the child's need of more nourishing food.

Miss Marvin had always nursed an ambition to try out her hot-lunch plan. So two years ago she was inspired to direct action by the haunting face of a frail, anemic little boy in her primer class, who had to walk two miles to school. For the sake of pathetic little figures like this one, she resolved to undertake the work. She did not, however, submit her plan to the parents for approval, realizing that it would meet with a dozen objections. In fact, she talked very little about it at all, until it was successfully launched, tactfully avoiding all friction. She simply "sawed wood."

Out of the proceeds of a school entertainment she bought a three-gallon aluminum kettle for $2.25. Then she quietly asked the pupils each to bring a small quantity of vegetables to school. One child contributed two or three potatoes, another brought a few carrots, a third supplied an onion, and a fourth had a fine soup bone at home which was just the thing for soup stock.

These materials were cooked together on the big flat-topped stove that heated the schoolroom. Thus the school had its first hot stew. Each cold autumn or winter day they had a different dish—just one. Now it was macaroni stew, now rice soup, then barley soup, bean soup, hominy soup, or hot stewed corn or tomatoes, canned by the pupils themselves in connection with their autumn school work under the teacher's supervision; and occasionally, just for a change, Miss Marvin decided to have hot chocolate or chocolate pudding. On one occasion last winter one of the boys on his way to school caught a rabbit which the pupils skinned and cleaned, with the aid of the teacher, and the next day the school had a savory rabbit stew.

THE children were enthusiastic. They liked the feeling of this hot dish at noontime, and almost never forgot to bring their contributions.

From the first, the parents were much interested and not at all inclined to adverse criticism. What farmer patron could object to parting with a few vegetables, a cup of rice, beans or hominy, or a package of macaroni occasionally? One mother has been so eager to help that she has several times sent the school veal stock. Miss Marvin always keeps a record of what each child brings, so that no family will be called upon to give more than its share.

At first the children were asked to bring saucers and spoons. Later on the citizens of the district formed a community club, with the schoolhouse as headquarters, and the organization equipped itself with dishes, which the teacher and her pupils are free to use.

Each child is served at his own desk, which is protected by outspread newspapers or paper napkins. The service is performed in orderly fashion by Miss Marvin and a few of the older girls. Manners, you see, are not neglected. Along with his cup of soup or saucer of hot tomatoes the pupil has the cold lunch which he has brought. After the meal most of the pupils are sent out to play, while Miss Marvin and her appointed helpers clear the table. By the time the afternoon session is due all signs of cooking and dishwashing have disappeared.

Miss Marvin has always found it expedient to do all the cooking herself. "In a one-room country school," she explained, "we have so little room that it would be impracticable to have the children help. They would only get in each other's way. Then we have so little time for extras that it would be hard to crowd it into school hours, and the parents might think the children were neglecting their studies.



Photo from International Harvester Company

Each child is served at his own desk, which is protected by outspread newspapers or paper napkins

"On the days when I plan to have soup I aim to arrive at the schoolhouse early, and put on the soup bone to cook and prepare the vegetables, to be added later in the morning. The soup cooks during school hours, and is very little trouble. A small oil stove with one or two burners is the best to use, because the large heater gets too hot for the comfort of the pupils when we fire up enough to keep the pot boiling. It would be easy for any teacher to buy an oil stove with the proceeds of a school entertainment. My patrons are now talking about getting me one.

"The kitchen equipment is simple and requires little room. We have a large cupboard for the lunch pails, one shelf of which is devoted to storing the canned goods, beans, rice, salt, sugar, and the like. In the cold weather we keep the vegetables and canned goods in a farmer's cellar near the schoolhouse, so they will not freeze."

The cost of the hot noonday luncheon need not frighten any teacher or school board. Miss Marvin has always avoided asking directly for money contributions from the parents, so the cost must be reckoned solely upon the donated material, most of which comes straight from the farm, with the expense of the middleman eliminated. She estimates that the vegetable soup may be prepared at an average ranging from two to four cents for each child. To fill the three-gallon kettle full of bean soup, she uses about two pounds of beans, a large potato, and half a pound of salt pork, all of which means an expenditure of 55 or 60 cents for raw materials. In other words, from fifteen to twenty hungry pupils on a cold winter day may have a satisfying lunch of bean soup for three or four cents apiece.

Other results of Miss Marvin's two years' experiment are greater interest of the pupils in their school work—because of their improved physical condition—and greater interest of both parents and pupils in the children's diet. The cold lunches which the youngsters now bring to school have distinctly improved, both as to quality and variety, showing an effort on the part of the mothers to provide daintier sandwiches, more fresh fruit, sauces and raisin bread, and the like.

Better yet, the district has become a fertile field for the propaganda of juvenile good health instituted by the Federal Children's Bureau. Miss Marvin has awakened much intelligent interest by distributing the various government pamphlets on nutrition. These contain suggestions for the school lunch, and tell just what sort of food a child should have to keep him in the best of health and spirits.

She has also given out the government score cards for keeping account of a child's weight. And more than one youngster has acquired the habit of weighing himself to see if he is gaining those precious pounds which Uncle Sam's experts say he needs to keep up a high standard of health.

A Country Church That "Came Back"

By Alice Mary Kimball

IN Platte County, Missouri, lives a farmer who has worked all his life with the idea of retiring in his old age and buying a home in Kansas City. He has reached the point at which this ambition may be easily realized but for one obstacle—his young son and daughter firmly and vigorously refuse to give their consent!

They refuse because—what do you think?—they are afraid the city would be dull! They are very sure, at any rate, that it wouldn't give them the satisfying social life they enjoy in their home neighborhood.

Their mother is partly responsible for the attitude of the children who won't let Dad leave the country. She was one of seventeen mothers who met one day to make plans for building a social center annex to Second Creek Church near Ferrelview, the oldest country church in the county. The seventeen had observed the waning influence and the gradual abandonment of many rural churches, and especially their failure to touch the lives of the growing boys and girls. They decided that Second Creek Church should not succumb to creeping paralysis, but should "come back" to the position of vitality and helpfulness it held in pioneer times.

Plans were made for a social center annex to the church, consisting of an up-to-date kitchen and a community dining-room and auditorium. Modern plumbing was to be installed, with lavatories, drinking fountains, and inside toilets. A hot-air furnace was to replace the stoves.

These improvements would cost $1,000. The figure was low because farmers in the neighborhood had offered to contribute labor and materials. Nevertheless, the raising of $1,000 was a task not to be lightly accomplished by a handful of busy country women in these days of scarcity of help.

"It will take a long time to raise $1,000," suggested one of the workers. "Our children would grow up in the time it would take for that money to trickle in from socials and bazaars. I move that we look on this as a business proposition and go at it just as men would. Who ever heard of men waiting for public improvements until they had raised the money by pie suppers? I propose that we borrow $1,000 at the bank and give our personal notes for it.

"If we get in debt we'll *have* to get out. Our good names will be at stake, and we'll work like beavers to make up the payments. If we get a loan we can start building right away. We can have our improvements and be getting the good of them while we're paying."

Everybody gasped. But the more the proposal was threshed over the more sensible it seemed. The neighborhood needed social enlivening at once.

The women adjourned to put the proposal to the president of a bank in the nearest village. They got the loan.

That was in 1917. The annex, completed in a few weeks, was equipped with a kitchen containing a gas stove, a cooking range, hot and cold running water, and every convenience for preparing and serving meals. The large dining hall is also used for a Sunday-school room, and as an auditorium for lectures, farmers' meetings, concerts, amateur theatricals, community dinners, and Christmas trees.

"The big thing about modernizing a country church is making up your mind to do it," said Mrs. Joe Couch of Westdall, Missouri, who is a leader in the social activities of the enlarged church. "Once you've decided to go ahead you'll get all kinds of co-operation. We couldn't have improved our church but for the help of our husbands, brothers, fathers, and sons.

"They contributed teams, labor, and material to the value of several hundred dollars. People who had never taken much interest in the church added their bit. The building of the annex stimulated the spirit of co-operation and teamwork, not only in the church but throughout the neighborhood. I think any band of church women could do what we did."

The annex has more than fulfilled expectations in supplying the community with social life. To the dinners given in the new dining hall, people come from a radius of twenty miles. They arrive by motor car, by mule team, and on foot. The young husband and wife who have just moved into the neighborhood shake hands with scores of new friends. Lifelong friends meet and talk across the table. The young people sit around in congenial groups.

Although the Second Creek Church was built as a Campbellite institution, it doesn't bear down on sectarian or dogmatic lines to-day. For this reason it has attracted people of varying religious faiths, and has become, in effect, nonsectarian.

The Ladies' Aid has met payments on the loan easily. The women got out a cookbook which they sold throughout the county to raise money. They have had entertainments, bazaars, and sales of food, garments, and fancy needlework. One day of each month they meet at the church to sew on garments which are sold for the church fund. Meanwhile there is "something doing"—some social or educational gathering—at the annex every week.

And that is why the boy and girl in the home of at least one farmer in Platte County, Missouri, are growing up happily and wholesomely on the farm, and not in the city.

Don't send a cent!



H. C. Phelps

You or your neighbors know me. I have warm friends all over the United States made by my Square Deal in the Split Hickory Vehicle business.

Order From This Advertisement

I'll Put This Magnificent $150.00 MASTERTONE Phonograph in Your Home—I'll Send You a Selection of Fine Records to Play It With—All Without One Cent Down. You Satisfy Yourself

I'm Making This Free Trial Offer

—to the honest, substantial folks, like the hundreds of thousands that have bought my fine buggies and carriages in the last 20 years. *I'll trust you to the limit*—for I know that you do business on good faith, just as I do. I went into the phonograph business some years ago because I believed there was a way to put the biggest, finest phonographs in your homes.

Now my plan is ready for you. It beats anything I have ever done or anything anybody else has ever done with a *real phonograph.* First you get it in your home to try absolutely free. Then you send me the low price only because you are perfectly satisfied—because you would not part with the MASTERTONE. Or, if you are not satisfied I'll take it back, and you keep your money.

You Simply Fill Out and Mail the Coupon

Send no money—no pay of any kind. Back comes the MASTERTONE and with it six fine *record selections* to play.

It is one of the three greatest phonographs in the world. Experts say the MASTERTONE reproduces the human voice, the piano, the violin, the music of famous bands with clearness, sweetness and naturalness all its own. You'll notice the freedom from roughness when you compare it with others.

You use the phonograph and the records as your own for ten days. Play it for your family, your neighbors, your friends. Take a vote of the whole family on it—and if you don't say it is as fine as any phonograph costing twice as much—if you want to part with it for any reason—I'll take the phonograph and the records back and you won't be out one cent of the purchase price.

Big, Beautiful Cabinet in Mahogany or Walnut

You have your choice of either Black Walnut or Mahogany finish. My royal MASTERTONE has a big artistic cabinet—48 inches high, 20 inches wide, 23½ inches deep—*the latest art style*—as beautiful as any you ever saw at any price. Make your choice—fill out the coupon—answer all the questions satisfactorily—do it today. I'll send the MASTERTONE to you *at once.*

Hear it and you will know why I am so willing to put it in your home without any money down—why I am willing to send it to you with six fine record selections—so you and your family and your friends can appreciate its real value at first hand.

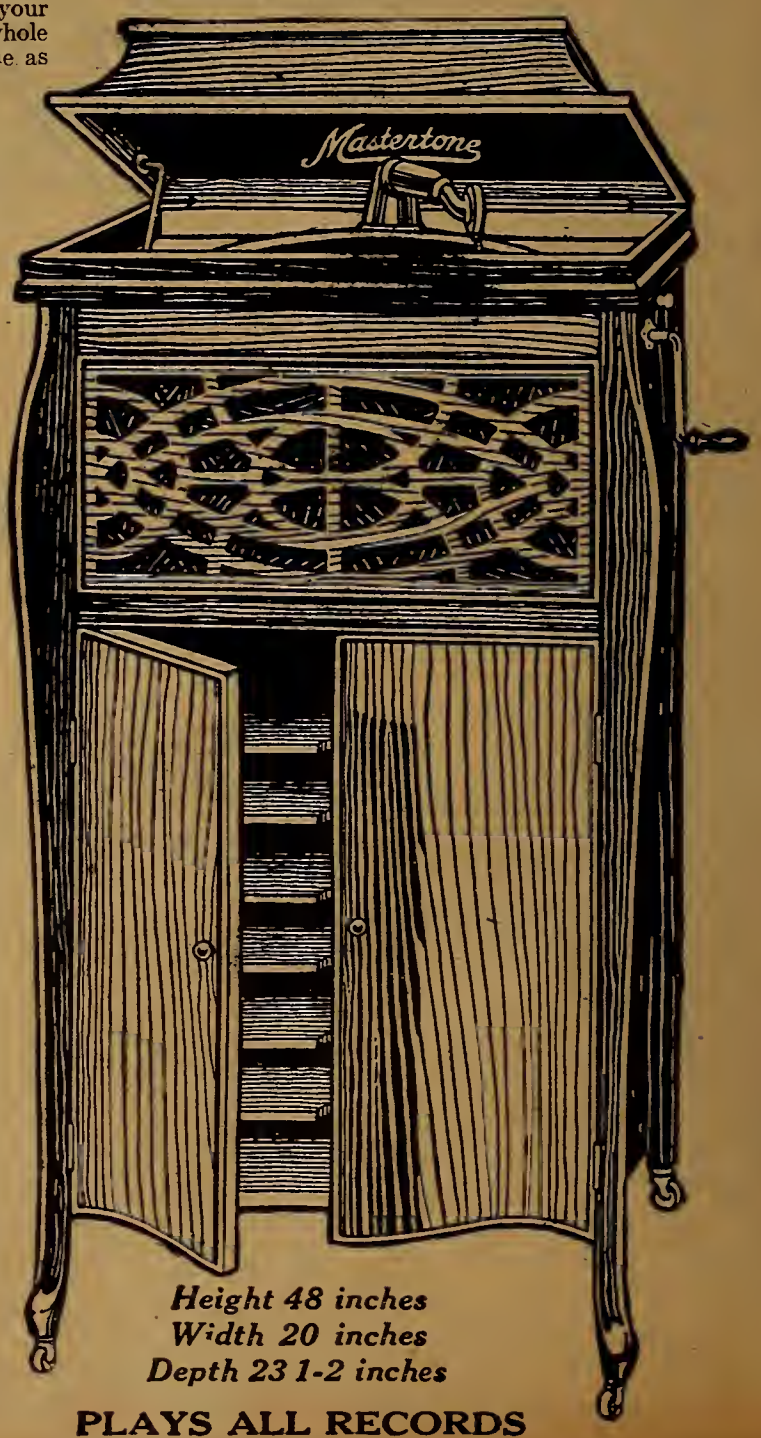
You Try My MASTERTONE In Your Home Ten Days. If You Want to Keep It Send Me Only $79.50

How can I afford to make this liberal offer? How can I sell this splendid instrument at this low price? Simply because of the saving to you of my sales methods. This advertisement is my only salesman. At my one small profit my MASTERTONE makes many sales, because every one of your friends will want a MASTERTONE when they hear it, and see how much better it is than the ordinary.

I send you my written absolute Guarantee of my MASTERTONE. I can not begin to describe its superior mechanism—the 29 ways in which it excels other phonographs. You have to *hear* the MASTERTONE Reproducer—the greatest advance in phonographic improvement—with genuine imported India mica diaphragm. You have to hear its patent Tone Modulator. You have to *enjoy* the records played by the MASTERTONE'S velvety, silent motor.

My MASTERTONE plays 4 to 6 records at one winding. Automatic Stop stops the machine at end of record.

Now—fill out the coupon today. Don't delay—for I want you to get the MASTERTONE as soon as possible. The first in each neighborhood will be the fortunate ones—for there will be a rush to take advantage of my offer. This is the first time I have ever published it.



Height 48 inches
Width 20 inches
Depth 23 1-2 inches

PLAYS ALL RECORDS

Whether You Order My MASTERTONE or Not, Get My Free Song Book

Write for the MASTERTONE Book whether you order or not. Your name and address on a post card will bring you full description and illustration of the phonograph in colors. I will also send you *FREE* my Book of Old Favorite Songs—the old-time melodies that everybody loves—50 famous songs—words and music. Write today.

H. C. Phelps, President, THE PHELPS FACTORIES, Dept. 107, Columbus, Ohio

The Phelps Factories, Dept. 107, Columbus, Ohio

Gentlemen: You may send me one MASTERTONE Phonograph in.....finish (you have choice of Walnut or Satin Finish Mahogany) on your ten days' free trial offer. I agree to pay the transportation charges and if after ten days' trial I find it perfectly satisfactory in every respect, I agree to send you $79.50 in full payment within ten days from receipt of Phonograph. It is understood that this does not place me under any obligation to keep the Phonograph. If for any reason I am not satisfied with it and do not want to keep it, I agree to return it at your expense. It is understood that the Phonograph remains your property until I pay for in full.

Name..... .....Town.....

State.....St. No. or R. F. D.....

Do you own property? If so give description and name of bank or any one else you desire to give as reference. Give complete description of property and names of references on seperate sheet of paper.

Shall we ship by freight or express?.....

NOTE: We recommend that you have Phonograph shipped by express to insure its reaching you promptly.

What is Bred in the Bone Will Come Out in the Flesh

[CONTINUED FROM PAGE 15]

would fight for him, but his general reputation was such that all of us feared him while we liked him, knowing too well his handiness with rope and branding iron, and his grave lack of appreciation of the rights of property.

A month passed by. Junkett had got his reward for killing "Flat-nosed George," and spent his share of it. His luck had been so good on this one foray that he induced the sheriff and the same deputy who had been with him before to go with him again after Tom, armed with a warrant. Incidentally, I think they were in hopes of surprising some other poor fellow who was in hiding. It was a ticklish thing to do, to thread those rocky passes and bury themselves in that maze of canyon and mountain so soon after the other killing. It will be long before any three men attempt it again; for this time they found what they were looking for.

It happened in this way: Tom had yet a a few horses up on the high range of that side of Brown River. He wished very much to see about them, to get one or two of them across for his mount. Why he did not tell us of his wish is a part of his whole course in life, which is pretty much obscure. Anyway, as he and Johnny Upward, our foreman, were taking a bunch of cattle up the trail to the mesa, he remarked, as they neared the summit: "Johnny, if you will take them on alone now, I will go back to the creek and ride down the canyon and camp, and in the morning get an early start and bring up all the cattle I can find."

Johnny agreed to this. Now, this trail ran through a great cleft in the mountainside. The sun sets there at a little after three, and while Johnny afterward testified that it was near night when Tom left him I have not the least doubt that there were yet some hours of sun. And Tom improved them.

Riding swiftly down the trail to the valley he urged his horse into a swift traveling pace, as swift as could be sustained, took the short cut across the hills, swam the river and, fearful of the canyon, pushed on up to the very top of the mountain. It was a wonderful ride to be made in the time, but Tom rode good mounts, and rode them hard. Some time after dusk he made camp, twenty miles as the crow flies from where he had left Johnny.

With a fine instinct for a camping site he rode down through a tangle of fallen poles of quaking aspen to a little grassy slope of a hundred yards, to the further side of this slope where there was a thicket of young aspens. Here he lay down with his saddle blankets and slept. Did he sleep? I wonder if angels whispered to him that night of the dreadful deeds that lay so close at hand; for early in the morning, led by some hint, I know not what, Junkett's party struck his trail.

They followed it down across the mountain top, down to the fallen timber, dismounted here, to avoid making a noise, I imagine, and, guns in hand, came cautiously down into the little grassy slope, came in sight of Tom's watchful eye, and he was ready. He waited until they were near enough, then opened fire. The sheriff was in the lead, the deputy next. Junkett brought up the rear.

AT THE first fire Junkett fell. At the second fire the deputy fell, dead. The sheriff turned, and fled up the slope. Tom did not fire at him, for some reason. As he passed Junkett he stopped, for the poor wretch had lifted himself up on his arm and was coughing out blood and trying to talk. As the sheriff stopped beside him he said two words, "Tom Wilson," and fell down, collapsed. The sheriff kept on running until he found his horse, and rode hard all that day until he reached the railway and civilization. And at once he wired the news, and all the mountain newspapers were filled with scare heads: "Tom Wilson and his gang have murdered two deputy sheriffs!"

The sheriff was afterward too confused to give any accurate account of what he saw or fancied he saw.

The sun was just rising over the level plains of the great mesa, and all below, in the great canyon of Brown River, it was yet filled with the cold morning shadow. Whether Tom had caught a fresh horse or whether yesterday's mount was able to carry him, I know not, but very soon he was in the saddle and slipping swiftly away from the two dead bodies lying there so huddled in the long grass, the magpies screaming at them and soon the coyotes to come and sniff at them, while Tom was slipping softly away and never setting foot in the trail, slipping right down to the awful bluffs of Brown River, slipping over the edge and down, down, slipping and sliding, jumping horse over ledge and pulling him through tangle of brush and tree, down, down, out of the greenery, onto the barrenness of the lower part of the canyon, following the deer trails along the brink of frightful precipices, seeing far below the cool, smooth water hurrying southward, down at last to the jumble of rock and sage brush that makes the lower slopes of the canyon, down, slipping, plunging, tearing through this jungle to the water's edge at last, and drinking deep, both rider and steed, and the shadow clinging to the bottom of the gorge!

SUCH a ride had never before been made, will never be again. Into the swift, smooth current plunged horse and rider. It was nothing for them. They struggled with it for a time, and only felt anxious that the passage consumed so much time. They emerged under the cottonwood, and the sun kissed them—it had crept down to the brink on that side—and they hurried down the river a little way, and then up, up, among the rocks and cliffs again, taking a desperate cut-off rather than risk the longer trail. Climb and scramble, puff and blow; rest a brief moment and try it again, out at last on the level top of the lower mesas, among the cedars and piñons. Away! Now away! From the haunting fear, away! From the dead things that lay, all unrepented, on yonder mountain top, away!—from the fear of pursuit and suspicion! At last the creek was reached, and the old horse was most cruelly ridden for the last ten miles of the journey, until, just as he was staggering and reeling and about to leave the rider afoot, Tom espied a fresh horse of his own, caught it, made quick shift of saddle and felt that he was almost saved. He gathered up a little bunch of cows, heard cattle ahead of him, and the hallooing of cowboys, dropped into a walk as he rounded the bend, and met them at the foot of the trail—and it was not yet ten o'clock!

Now, to have made a deliberate ride by trail from where the two dead men lay growing purple in the sunlight to where Tom met our men would take two days, and few tenderfeet would care to make it in less time.

What is the rest of the tale? I was at Denver when the news came in the papers. When I reached the end of my railway journey there, a carload of man-hunters with fine saddle horses had been unloaded and started on the trail to find Tom Wilson. Of course they had started on the wrong side of the river. They were simply a lot of would-be bad men, boasters of Saltero, anxious for an outing and to maintain their reputation as bad men. But that sort of man is also dangerous to meet, for he is a coward at heart and reckless when he has the shadow of the law at his back. So I rode across the hills to the ranch, sad at heart and wondering what would be the next chapter.

Johnny met me and reassured me.

"It could not have been Tom who did the killing, for he has not been away from the ranch a minute for two weeks," he declared.

"No matter, they will kill him on sight, if they find him," I replied.

And we rode up next morning to find him and carry warning. Far off on the crest of a ridge we saw two horsemen outlined against the sky.

"Tom and our herder," said Johnny.

One figure slipped away over the crest and disappeared. When we rode up we met the herder, an ignorant Danish boy.

"Where is Tom Wilson?" we asked.

"Who is that man with you?" he replied, inquiring of Johnny.

"He is the owner of this ranch," Johnny assured him. They had hired the boy during my absence.

"Then Tom is over at Indian Spring, but if you were strangers he told me to say that I did not know where he was," was the guileless response.

[CONTINUED ON PAGE 47]

This is the Acid

That Destroys Your Teeth

All Statements Approved by High Dental Authorities



Hidden in the Film

The acid which destroys your teeth is lactic acid, produced from certain foods by action of bacteria.

The film on your teeth—that slimy film—holds the food substance while it ferments and forms acid. Then it holds the acid in contact with the teeth to cause decay.

This film clings to teeth, gets between the teeth, enters crevices and stays. The ordinary dentifrice does not dissolve it. The tooth brush fails to remove it all. So it protects the acid. Free acids are neutralized by alkaline saliva.

That film is the source of nearly all tooth troubles. That is what discolors, not your teeth. It is the basis of tartar. It is a breeder of germs—millions of them. Those germs, with tartar, are the chief causes of pyorrhea.

Brushing the teeth does not suffice, as nearly everybody knows. You must remove the film. After painstaking research, dental science has found a way to do that. The way is now embodied in a dentifrice called Pepsodent. And we offer you a 10-Day Tube to show you what it does.

Use It 10 Days—Free

Pepsodent is based on pepsin, the digestant of albumin. The film is albuminous matter. The object of Pepsodent is to dissolve it, then to constantly combat it.

Ordinary pepsin will not do. It must be activated, and the usual agent is harmful to the teeth. So pepsin long seemed impossible.

Now science has invented a harmless activating method. Five governments have already granted patents. Now active pepsin can be applied twice daily to the teeth.

Authorities have made many clinical tests. Thousands of dentists have tried it. And now leading dentists all over America urge its universal adoption.

Pepsodent PAT. OFF. REG. U.S.

The New-Day Dentifrice

A Scientific Product—Sold by Druggists Everywhere

259

Send the Coupon for a 10-Day Tube

Note how clean the teeth feel after using. Mark the absence of the slimy film. See how the teeth whiten as the fixed film disappears.

Ten-Day Tube Free

THE PEPSODENT COMPANY,
Dept. 782, 1104 S. Wabash Ave., Chicago, Ill.
Mail 10-Day Tube of Pepsodent to

Name .....

Address .....

VICTROLA

The instrument specially made to play Victor and Victrola Records



"What artists make records for it?" That indicates the quality of a talking-machine as a musical instrument—upon that depends the pleasure you will get from it.

The Victrola brings to you the greatest artists of all the world—and they make records for the Victor Company exclusively because they are convinced that only Victor Records do full justice to their art; that only the Victrola brings that art into your home in all its beauty.

Such fidelity of tone is possible only because Victor Records and the Victrola are scientifically coordinated and synchronized in the processes of manufacture. They should be used *together* to secure a perfect reproduction. That is the way for you to hear in your own home the superb interpretations of the greatest artists exactly as they themselves heard and approved their own work.

Victors and Victrolas $12 to $950. Write us for catalogs and name of nearest Victor dealer.

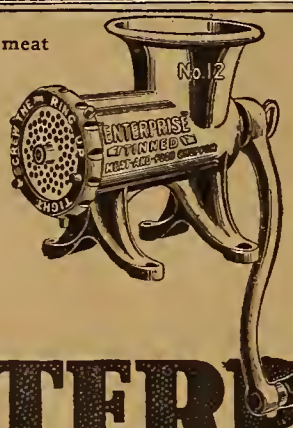


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VICTOR TALKING MACHINE CO., CAMDEN, N. J.

No. 12.—Chops 3 lbs. meat per minute. Price, $5.00

No. 22.—Chops 4 lbs. meat per minute. Price, $8.50



KNIFE AND PLATE
ENTERPRISE

"ENTERPRISE"

2- to 8-qt. Stuffers, 4-qt. size, Japanned, $12.25
6-qt. size, Japanned, $14.00
8-qt. size, Japanned, $15.00

The name "ENTERPRISE" means Economy and Best Results in Making lard and sausage—whether for market or home use.

The "ENTERPRISE" Meat-and-Food Chopper cuts clean and without wasting the meat juices: Because it has four-bladed *steel* knife and perforated *steel* plate. It economizes in the kitchen, too.

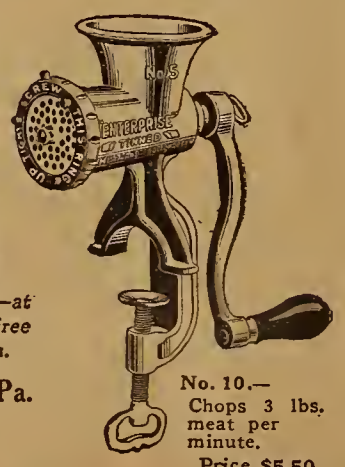
The "ENTERPRISE" Lard Press and Sausage Stuffer saves lard. It stuffs sausage that won't spoil—the Patented Corrugated Spout keeps air from entering casing. Cylinder is bored TRUE.

Ask for "ENTERPRISE"—at your dealer's. Write us for free "Hog Book," by F. D. Coburn.

The Enterprise Mfg. Co. of Pa.
Dept. 96, Philadelphia



No. 5.—Price, $3.50 Chops 1½ lbs. meat per minute.



No. 10.—Chops 3 lbs. meat per minute. Price, $5.50

What Four Women Think of Our Better Babies Letters

YOUR second letter came, and I was so glad to get it, as well as the first one, which came some time ago. I intended writing you before, but, living on a ranch, we have so many things to do.

Your letters mean so much to me, so much more because I really know so little about everything about babies. As this is our first one, we are more than anxious to have a really "better baby."

The leaflets sent with the letters are so helpful. I sent for one of the maternity dress patterns, and am going to make some of my clothes myself.

Your letters explain so many of the things I've been wondering about. I do want to do just what is best. As we have to go about twenty-five miles for the advice of a physician, you see we can't go very often, and so the letters help a great deal. We have a good physician already engaged, though, believing, as you suggest, the earlier the better.

I am anxiously awaiting your next letter concerning baby's layette.

Mrs. F. N. L., California.



I WANT to thank you for your most cordial welcome of myself into your Expectant Mothers' Circle, and also for the splendidly helpful letters I have been receiving each month.

They surely have been a wonderful help to me, and I think that you are doing a truly wonderful work in making it possible for all expectant mothers, for the tiny sum of 50 cents, to have the help and inspiration your letters impart.

Although this is only the sixth month, I am beginning to look forward to the arrival of our baby, and I trust it will be a "better baby."

At first I dreaded confinement, but since I have been receiving your lovely letters they have so inspired me that I begin to see more and more what a wonderful blessing God has bestowed upon women, and it seems very sweet to know that I myself am going to be the mother of a wee, little, dear, sweet baby.

Be assured of my sincere appreciation.

Mrs. L. S. F. Michigan.

I HAD meant to write to you during the months of waiting for our baby, but the days slipped by without my doing it.

Now, however, I want to tell you how much I enjoyed each letter, and, although I had every care, I always found some suggestion in your letters that helped so much. I surely want the next series, and am enclosing the card and stamps.

Perhaps you will remember that my husband was in France? Well, it became a race between him and the stork, and he won by just twenty-four hours. Isn't that like a story-book tale?

Thanks to the good care and exercise during the months of waiting, I was in splendid shape, and have recovered my strength so rapidly that my friends are simply amazed. The baby weighed seven and a quarter pounds when he was born, and gained nearly an ounce a day. I have started him on the four-hour schedule, and have very little trouble sticking to it, he is so good and so well.

And we mean to keep him so if we can. I don't want to bore you, but felt sure of your interest in this new member of your circle.

I thank you for your help, and may I receive the first of the new letters soon?

Mrs. H. M. G.

YOUR last letter received, and I hardly know how to express myself to thank you and let you know how much help you have been to me. I shall certainly miss the letters, they were a godsend to me.

I knew nothing about babies, and I wish you could see our daughter—she is a big, strong, healthy girl, and I owe it all to your advice.

I was glad that your last letter gave me some helpful ideas on feeding her when she gets older, as one of the things I did not know was when to give her hearty food. She is very healthy and likes all kinds of cereal and milk and zwieback and potatoes. But now I can give her other things.

You have been like a mother to me; just as soon as I would get a letter from you I would have to sit right down and read it. It was like getting a letter from home. And after a few days I would begin to look and wait for another, and sometimes it would seem an awfully long time before I heard from you.

If I know of anyone who needs your letters of advice I shall certainly tell them of you, and also see that they write to you. I am going to write to you once in a while myself and let you know how my daughter is getting along.

Mrs. A. B. C., Maine.



What the Better Babies Bureau Is

And how to secure its help

THE EXPECTANT MOTHERS' CIRCLE: Any woman eligible, whether she is a subscriber or not, may become a member, receiving each month a letter of advice on the care of herself and the preparation for her baby. Several practical little pamphlet circulars showing designs for maternity dresses and a common-sense layette are some of the helps sent with the letters. No matter at what period you enter, everything from the first month will be sent. No mention of the Better Babies Bureau is made on the envelopes in which the material is mailed. Enclose a self-addressed envelope with *Fifty Cents* in stamps, for postage, *and state what month you expect your baby.*

THE MOTHERS' CLUB: Every mother of young children is eligible and need not be a subscriber to join. Pamphlets, together with monthly letters of instruction on the care and feeding of babies *under one year of age* (covering such subjects as colic, constipation, weaning, teething, etc.), will be sent to any mother who sends *Fifty Cents* in stamps and states the age of her baby. There are also leaflets giving diet lists, and other helps for babies from one year of age to three years. This literature is all included in the Mothers' Club's monthly service, but if the letters are not desired the additional literature will be sent for *Ten Cents.* A self-addressed stamped envelope will bring a prompt reply to every inquiry. Address all inquiries to

BETTER BABIES BUREAU

FARM AND FIRESIDE 381 Fourth Avenue, New York City

Started Life in a Barn

[CONTINUED FROM PAGE 26]

be well to speak of my fencing. I find cement useful on the farm, especially for fence posts.

I experimented some time before I found out what I thought to be the best way to make them. I make molds and reinforce the posts with six No. 7 wires. The hard wire I find much better than the soft, for if the post is broken it does not fall over, the wire being elastic enough to force the post up again. The post is made heavier at the surface of the ground, and by fitting it into the mold perfectly it comes out with a smooth surface. Besides posts, foundation blocks are also made.

I have a tender spot in my heart for all animals.

I have always been painstaking with the care of my tools and farming implements. When I put them away for the winter I loosen them up and oil them. In the summer I keep them from standing in the hot sun and rain.

Though I have always worked very hard, I have always taken time to attend church services, and assist in every way with the activities of the church work and civic reform. I was chairman of our County Farmers' Institute for 1910 and 1911.

My wife has been a helpmate to me in every sense of the term. Her economy and good management with the children and in our home, her tidy housekeeping and kind disposition, have not only been a source of great pleasure to me, but have aided me very materially to succeed.

We have four children—two boys and two girls, all married now but one son. And now, as age is creeping upon us, our children, whom we have always enjoyed, are a source of more pleasure than ever.

Our boys helped on the farm until a few years ago, when they married and went to work for themselves. We gave each a good education, and those that were musical were given a musical education. Not only do the girls have these accomplishments, but they each have a *thorough knowledge of good housekeeping.*

Thinking that perhaps, before closing this article, my experience of how much stock can be well kept on an 80-acre farm might be helpful to an owner or tenant on that amount of land, I will say that I have kept, and have seen others keep, three cows, three brood mares, ten ewes, six brood sows, and a stock of poultry.

I raised two litters of pigs a year from these sows. This land should produce enough grain to feed this amount of stock.

In conclusion, I do not feel that I have accomplished more than hundreds of others, nor more than most farmers would do under the same conditions if they would be willing to work hard, economize, and concentrate their every effort to the one industry—farming and general stock-raising.

He Took the Poor Old Farm

[CONTINUED FROM PAGE 20]

work, "but that was forty years ago, and the land was so rich then that it didn't need manure or anything else to make crops grow. But you fellows have cropped it in cotton and corn so long, and let it wash, I think I can show you a difference this fall."

And he did—you could tell to the row where the manure was spread. In fact, there was such a vast difference in the fertilized and unfertilized crop that the old gentleman never referred to the subject again.

Then soybeans were introduced in the South as a hog feed and soil builder, and now every row of corn on the Matthews place is planted to soybeans, and in the fall of the year, after the corn is gathered, the hogs are turned into the fields and grow fat.

Alfalfa, corn, potatoes, hogs, cows, and just a little cotton on the side—these are the money makers on John Matthews farm.

I said that Matthews paid for his place twice, and he has. When he took charge the farm was mortgaged for about all it was worth at that time. He paid off the mortgage. Then he decided to buy it from the heirs—his brothers and sisters. He bought it, thus paying for it the second time.

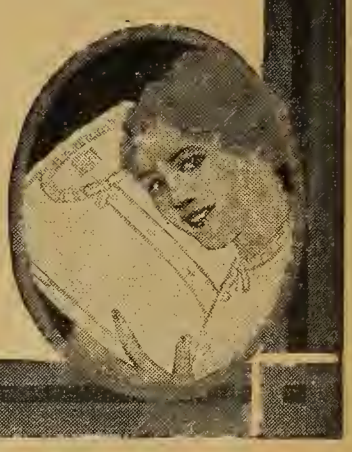
He has accomplished all this on a run-down farm, and under the most trying circumstances, by being in love with his work, keeping eternally at it, never being discouraged, producing what the farm consumed, and keeping abreast of the times.



A Healthy, Happy Family All Winter—in "Vellastic"

ROMPS and ruddy cheeks and lusty lungs are the thing for winter—not croups and colds and sniffles. And "VELLASTIC" is the secret.

When the first winter wind b-l-o-o-o-o-o's around the corner of the house, jump the whole family into "VELLASTIC" right away. Father, mother, Bessie and Bobby and everybody. If the wind is already b-l-o-o-o-i-n-g, it is not too late—but hurry. "VELLASTIC" has a cozy fleece lining and a stretchy ribbed exterior. It combines warmth and snugness and fit and comfort. And, thanks to the money-saving methods of the big mills in which it is manufactured, it is economical, too. All good stores have "VELLASTIC"—in union suits or separate garments.



UTICA KNITTING COMPANY, Utica, N. Y. New York Office: 350 Broadway

Agents $50 a Week

Something New. 2 in 1 Reversible Raincoat

Two coats in one. One side a handsome raincoat, reverse side fine dress coat. Ideal for rough work and hard service. For business men, clerks, mechanics, farmers, teamsters, truck drivers, miners—every man in your community is a prospect.



Guaranteed Water-proof

Nothing else like it. Not sold in stores. Easy sales on account of two coats for the price of one. Don't fail to get this big, new money maker quick. Right now is the season. Everybody buys.

Make $6.00 to $15.00 a Day

Don't pass up this big opportunity. Work full time or spare time. No matter what you are doing, or what your occupation may be—you will find this to be a big money maker. We are paying thousands of dollars to our representatives. Don't delay. Act quick. Get your sample and be first in your locality to introduce this new big seller. Write quick for our special offer and free outfit to county representatives. Don't put this off. Territory going fast.

THOMAS RAINCOAT CO. 1346 Jane St. DAYTON, OHIO

Send NO Money!



Simply send your size and these wonderful Dress Shoes will come to your home at once. You'll be proud of them. Built solid full of wear. Genuine oak leather soles. Note the splendid extra quality leather! Enjoy their blessed comfort! The risk is ours—these must delight you or no sale.

Pay only $4.39 on arrival

We Guarantee that these shoes are $7.00 to $8.00 values; that they will give satisfactory wear or we will send a new pair FREE.

Business Man's Dress Shoe

Only $4.39 ON ARRIVAL
POSTAGE FREE
Black Dress Shoe
Save profits. Buy Direct from Factory Headquarters.

Mail Coupon Only

Boston Mail Order House, Dept. 464-T, Boston, Mass.
Send shoes on approval. My money back if I want it. I risk nothing.

Name..... Size.....
Address.....



Durable-DURHAM Hosiery is a product of industrial democracy—never of Child Labor. We have no strikes or lockouts.

DURABLE DURHAM HOSIERY TRADE MARK

Full of warmth and full of wear

HERE is comfort for cold weather. Durable-DURHAM fleecy-lined Hosiery *is* warm, and because of this it is the sensible hosiery for winter wear. Every pair has soft, thick, fleecy lining. They have the strength to give long wear—and stay good-looking through many wearings and washings.

Durable-DURHAM Hosiery includes not only Fleecy-lined but other styles for every member of the family—for work, dress, or play—for every season of the year. The children's stockings are made doubly strong to stand the hardest wear and tear. Styles for men and women include all fashionable colors and come in all weights from sheer mercerized to the heavy fleecy-lined.

Every pair is extra strongly reinforced at points of hardest wear. Legs are full length; tops wide and elastic; sizes are accurately marked. Soles and toes are smooth, seamless and even. The Durham dyes will not fade.

DURABLE DURHAM HOSIERY

FOR MEN, WOMEN AND CHILDREN

MADE STRONGEST WHERE THE WEAR IS HARDEST

Ask for Durable-DURHAM Hosiery and look for the trade mark ticket attached to each pair. You should be able to buy it at any dealer's. If you do not find it, please write to our sales department, 88 Leonard Street, New York, giving us the name of your dealer.

Durham Hosiery Mills, Durham, N. C.

Sales Office: 88 Leonard Street, New York

MENDETS—WONDER MONEY MAKERS mend leaks instantly in all utensils, hot water bags, etc. Insert and tighten. 10c and 25c a package, postpaid. Agents Wanted. Collette Mfg. Co., Box 704, Amsterdam, N.Y.

FILMS DEVELOPED FREE—any size, 12 prints (trial order) 2c each. Quick—Satisfactory work guaranteed. Remit with order. Save money. BENNETT STUDIO, Hyde Park, Cincinnati, Ohio.

GLASTENBURY HEALTH UNDERWEAR

GLASTENBURY Established 1855 KNITTING CO.

GLASTENBURY TRADE MARK HEALTH UNDERWEAR

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FOR MEN

PROTECTION against chilling of the body; often a fore-runner of colds, pneumonia and rheumatism.

Famous over half a century for its superior qualities.

Every garment shaped to the figure and **guaranteed not to shrink.**

Glastenbury Two-Piece and **Union Suits,** Flat Knit Spring-Needle Underwear are made in several weights of fine wools, worsted, and merino.

Adjustable drawer bands on all two-piece grades

	Prices
Natural Gray Wool, **winter weights,** in four qualities	$2.50 to $7.00
Natural Gray Wool, **super weights,** in two qualities	Per Garment
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For Sale by Leading Dealers

Write for booklet—sample cuttings. Yours for the asking. Dept. 32

GLASTONBURY KNITTING COMPANY, Glastonbury, Conn.

The Pell Street Rejuvenator

[CONTINUED FROM PAGE 38]

middle-aged before your time, and that altered territory will do you a world of good. You're too fine a drummer to waste entirely on the cinch routes. So I've sliced off just a corner of the fat—and I hope it will do the same for you. Why don't you take a little exercise before breakfast, like me?"

BILLY SIMMS made one or two incoherent noises, but the gayly juvenile air of the once timid and harassed sales manager was a transformation too startling and complete. It robbed Billy of his well-known power of repartee.

He decided suddenly that if he did not get out into the open air he would undoubtedly fall a victim to apoplexy. The other salesmen were edging toward the door, grinning foolishly. With a snort of impotent disgust Simms shot ahead of them, leading to the elevator a silently amused and slightly awe-stricken procession.

When Jonathan Potter looked up from those disastrous monthly statements, he saw a double row of empty desks. Two intensely interested stenographers caught his eye, and fell to tapping again with guilty industry. His victory was complete.

The episode failed to present itself to Potter in the light of a victory, however. He had already reached a mental stage in which he regarded Billy Simms no longer as a dangerous critic and rival for his own desk, to be placated and favored. Simms appeared now as an obese skulker, suspiciously secretive as to his age, openly inclined to lie down on his job—one on whom justice had been too long delayed.

Besides, he was doing some swift thinking on the subject of the inevitable interview with Everhard about the falling sales figures. He passed between the deserted desks, surveying himself once or twice with some approval in the frosted glass door that led to the junior partner's room. Almost before he realized the transition, he had completely risen above the state of mind in which he had awaited Everhard's displeasure with a certain apprehension. In five minutes he had worked himself into a condition of keen displeasure with Everhard.

"Poor old fish!" he told himself. "It was Dean that made the firm, anyway. Carried Everhard on his shoulders to prosperity. Where does a faded remnant like him come in, to bully me? Time to trim him a piece!"

He sat down at a vacant typewriter and carefully clicked off a brief letter under the business head of the establishment. He had just signed it, and was sealing it in an envelope, when an office boy announced the arrival of the junior partner.

"Well, I'm loaded for him!" said Potter gayly.

The junior partner was junior only in name. He was very bald, somewhat shrunken as to the neck, and he wore an air of embittered distrust. His manner in the office conveyed that, in his confident opinion, the object of employees was to draw salaries for loafing, and that the reason of his own existence was to defeat this ambition. When Jonathan Potter entered, Everhard was looking over his private mail, and he motioned Potter to a seat without even a glance at him—a form of discourtesy vaguely identified in the junior partner's mind with discipline.

Potter did not sit down. He stood at Everhard's shoulder, smiling—a smile that had in its assurance of triumph a touch of pity. The tragedy of having no hair on the top of one's head!

"About those statements, Potter," began Everhard at last, leaning back in his chair and placing his finger tips together. "This question of New York sales has become too serious a matter to be shelved any longer. I've talked until I'm tired—"

At the moment he glanced up, caught the pitying, chean-shaven smile of his transformed sales manager, and closed the sentence with a word that sounded like "Wumph!"

"You were about to say—" suggested Potter indulgently.

"Why, I—I've forgotten what I was going to say."

"Then let me save you the trouble," said Potter decisively. "You were going to say that there's something pretty serious the matter with this firm. And you're right. The trouble with this firm is you!"

Everhard said "Wumph!" again, and stared blankly.

"Yes," said the sales manager, with decision, "I've let you crowd me into a corner and tie my hands behind me. I've let you kill my best schemes for the sake of economy. I've stood by while you drove my best men to opposition firms to save a five-dollar boost. I've watched you clear off to Palm Beach when I wanted to talk about growing competition. But now that the come-back has arrived in our midst I'm not going to let you put all the blame on me!"

"I don't understand you at all," observed Everhard with sudden cold precision.

Potter strode up and down the carpet, sawing the air and waving a sheaf of papers at his employer.

"That's what I expected. You can't get me until you wake up, and you won't wake up until you get me! The business is sound enough at bottom. We hold our place, though we're weakening pretty fast. What we need is youth at the helm."

He threw a chest and stuck a thumb jauntily in his waistcoat.

"You know, Everhard," he went on, with an air of kindly admonition, "you're not by any means so young as you were. You've nothing to gain by blinking that! What you need is new blood at the head of the firm. The rest of us are young enough, but we've been smothered under a dead weight."

"One would think," remarked the junior partner, "that you were about to offer your resignation. On my word—"

"It's there," replied Potter, producing and tabling the letter he had just typed. "That's me—no sooner the word than the blow! If I were an older man it would be different. But I'm too young to stay by a sinking ship while the swimming is good. Now, I've done the best day's work I ever did for this firm. I'm going out and play two or three games of pool to clear my head."

He departed, leaving Everhard fighting desperately for breath.

Jonathan Potter, on his part, had never breathed so freely. It was the first time in ten years that he had broken through the fence of office routine sufficiently to visit his club in working hours. He crushed the plush hat on the back of his head, grasped his cane by the middle, and burst forth into Broadway, humming an air that had been popular in his salad days. On his way to the club he called at his bank and drew a thousand dollars in new yellow-backs. The paying teller inspected him carefully before handing over the money, to make sure of his identity.

ONCE more in the bright spring sunshine, the yellow-backs in Potter's pocket began to radiate a vivid thrill of intoxicating freedom. For the harassed and routine-ridden business man there is probably no tonic so effective as the feeling of an unaccustomed bank roll in the hip pocket. So marked was the effect that at the club he played pool with Eddie Mackenna, whose harum-scarum youth had hitherto made him appear quite impossible.

Eddie was flattered. He confided to Potter that he had just pulled off a big deal and was going to take an ideal holiday. His ideal proved to be the hiring of a flat-boat in which he might float slap down the Mississippi, from the Chicago canal to New Orleans, in the absolute impossibility of doing anything but loaf.

"I'm taking a shotgun and a camera and a skillet," he said. "The man in Chicago is fixing me a hammock on board and laying in canned goods for a month. Say, don't you envy me?"

Potter gasped at the vision of spacious liberty. The more he thought of Eddie's idea the more he liked it. They discussed it until Potter realized, with merely passing concern, that the hour of closing the offices of Dean & Everhard had come and gone. At last, with sudden decision, he went to the telephone and called up Veronica Cullen.

"Hello, Vee!" he said. "Is that idiot Piddock going to be there to-night?"

"Why, yes; I—I told him that he might take me out to supper," came back the mellifluous accents of the paragon of women.

"Then you need not expect me," laughed Potter. "I shall take a friend to Hector's on my own."

He returned to the billiard-room with his mouth set in a straight line of determination.

"Say, Mackenna," he demanded, "how many hammocks have you got on that boat?"

[CONTINUED ON PAGE 50]

Farm Meat for Farm Tables

By L. E. Armour

WE HAVE discovered in our neighborhood a plan for providing a generous and comparatively inexpensive meat supply for our tables. I know many who raise cattle but who rarely kill a beef because they feel they cannot afford it. But they are among those who waste too much of what to the packer is valuable by-product—namely, blood, entrails, feet, head, and horns.

Let me tell you how we manage. Our poultry and pork are home-grown, killed and prepared.

For our beef, mutton, and veal we aim to co-operate with at least three neighbors, and each one of this group of four families butchers one small young beef and one or more veals and fat sheep each year.

A suitable butchering shed was prepared where the work is conveniently done, and provision is made for saving all the blood and every part of the carcass. The bones below the knees and hocks, and the feet, are cleaned the same as hogs' feet, and boiled until the meat is perfectly tender and slips easily from the bones. The meat is then seasoned with salt, pepper, a pinch of sage, a little flour, a minced onion, and a beaten egg stirred in. This is carefully mixed, then dropped by spoonfuls into hot fat, and fried. Thus handled, what is too often wasted is to us about the best relished part of our beeves. The water is then evaporated from the oil in which the feet and leg bones were cooked by boiling, and the neat's-foot oil resulting is strained and bottled for harness and leather dressing.

The heads of beef, sheep, and calf are carefully cut up with a cleaver on a block, and are used for head cheese, hash, and sausage. The tongue boiled and served cold is a titbit high in favor. So, too, with heart and liver—every bit becomes appetizing meat for our family.

Instead of the customary way of frying liver, I slice it thinly, season, roll in flour, and fry in boiling fat like doughnuts, putting in the oven to brown, and turning when one side is browned. It's then no longer beef liver.

The heart I stew until tender, then bake with a dressing made of bread crumbs, seasoned as for chicken and made rich with butter. This makes a dish fit for a king.

The tail goes into "ox-tail" soup. All bones are ground for the laying hens, and the best of the entrails become tripe or sausage casings. Of course, every ounce of tallow leaf and "rough" is rendered, the best going into a lard compound shortening, and the poorest for soap-making.

All of these too often wasted by-products supply us with practically half as much value in meat as do a quarter of the animals butchered, and the variety furnished is much appreciated.

In cold weather some of the choicest roasts and steaks can be kept for future eating, some of the remainder is corned and some dried.

According to our reckoning, this plan of farm meat supply we are now making use of furnishes us about three times as much choice meat as we would get for the same expenditure were it bought at retail prices, as practiced by many.

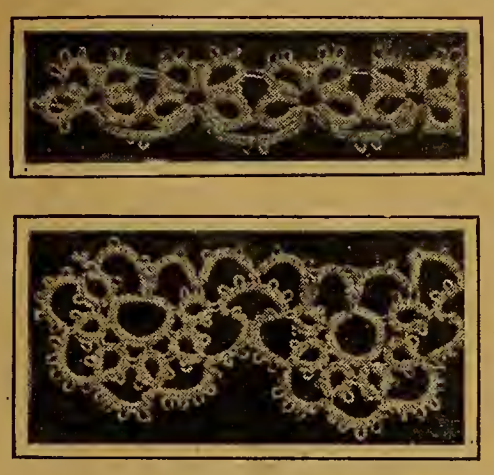
CARE OF IRON UTENSILS—Great care must be exercised in the washing of iron utensils to keep them from rusting. They may be washed with warm water and soap like any other utensil, but must be dried carefully. It is a good plan to allow them to stand for a minute or two in a warm oven after being dried. In some climates the air is so damp that iron will rust on standing. To remove the rust, rub with emery and then polish with whiting or paraffin oil. Often the rust can be taken off by cleaning with kersosene.

N. B., South Dakota.

AN EASY WAY TO DUST—The easiest and most satisfactory method of dusting floors is to go over them with a floor mop which has been moistened with oil. An economical and effective oil is a solution of two parts of paraffin oil and one of kerosene. The floors should be dusted once a day. It is a good plan to clean the mop once a month by washing thoroughly with warm water and soap.

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FC-121



HOW about a new edge for that underwear you're making these fall evenings? The Fancy-Work Editor, Farm and Fireside, Springfield, Ohio, will gladly send you directions for these two designs if you send her four cents in stamps. Order No. FC-121.

"Nodding Roses" Yoke

FC-120



DIRECTIONS for making this fascinating yoke will be sent to you on receipt of four cents in stamps, by the Fancy-Work Editor, Farm and Fireside, Springfield, Ohio. Order No. FC-120.



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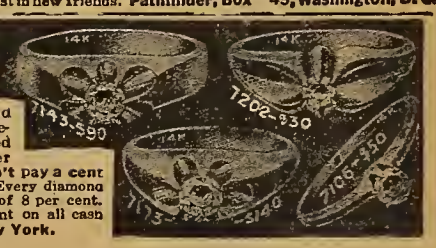
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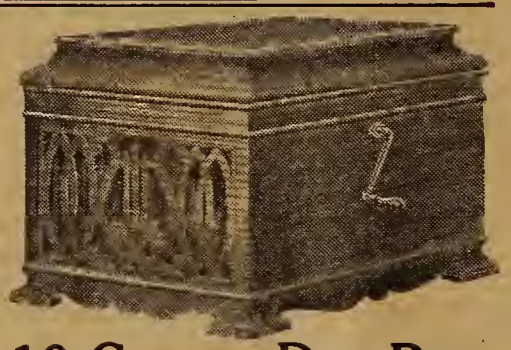
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Be Careful What You Wash Your Hair With

Most soaps and prepared shampoos contain too much alkali, which is very injurious, as it dries the scalp and makes the hair brittle.

The best thing to use is Mulsified cocoanut oil shampoo, for this is pure and entirely greaseless. It's very cheap and beats anything else all to pieces. You can get this at any drug store, and a few ounces will last the whole family for months.

Simply moisten the hair with water and rub it in, about a teaspoonful is all that is required. It makes an abundance of rich, creamy lather, cleanses thoroughly, and rinses out easily. The hair dries quickly and evenly, and is soft, fresh looking, bright, fluffy, wavy, and easy to handle. Besides, it loosens and takes out every particle of dust, dirt and dandruff.

A Hard-Times Party

Prize-Winning Entertainment

By Mabelle Stewart, Iowa

GLADLY will I pass along these ideas for a Hard-Times Party which I planned and which was successfully carried out.

It was for a Sunday-school class of young married people. The families were also included in the invitations, which were written on brown wrapping paper.

I began preparations by removing all signs of prosperity from my home. I took down all pictures and wall decorations, and replaced them with cheap-looking pictures cut from newspapers. All window shades and hangings were taken away, in some instances being replaced by disreputable shades which had been cast aside. Some windows were hung with faded calico, and some were left bare. Up-stairs and down the idea of extreme poverty was carried out, using the most ragged quilts, pillowcases, etc., which I could find or borrow. An old battered teapot and tin washbasin on a backless chair gave indications that efforts were made for cleanliness, even under these adverse circumstances.

I would have taken up the rugs in the parlor and dining-room had it not been too much trouble to move the stove, but as it was they were scarcely visible, being covered with strips of faded rag carpet and home-made rugs. All tables were covered with something ridiculous—ragged cloths, colored handkerchiefs, etc.—and for seats long planks were laid from one box to another and covered with old blankets, shawls, or quilts, the chairs being taken to an unused room. Of course, some old broken chairs and boxes were in evidence, inviting the tired guests to have a seat.

Having announced that there would be a prize given for the one presenting the most poverty-stricken appearance, amazing and ridiculous costumes met me at the door. I will not attempt to describe them, but certainly there were some original ideas.

For entertainment we passed to each guest a slip containing some reason for his or her present financial condition—merely the fact—recipient to make as flowery a speech as he or she desired. Many things will present themselves as one writes the slips, but here are a few examples: One man said he had to keep his wife's relatives; another that his farm contained too many shade trees. One woman, whom we all knew to be a very hard worker, said she spent too much time in the hammock. It was hard to tell which was the funnier, when the "reasons" happened to fit the party receiving them or when they were just an exact opposite, as sometimes happened.

Next I gave each one a chance to draw out two pictures (previously cut from old catalogues and pasted on cardboard, with titles in plain sight, so there would be no chance for error). I then announced that each one had confided to his or her best friend that if he (or she) ever did get hold of money enough there were two things upon which he had set his heart. As each one had drawn a name from a separate box when the pictures were passed, only names of those present being used, said name representing the dear friend, all were now ready to tell their secret. Of course, the pictures were nearly all of frivolous, unlikely things, and the reading caused much merriment. One would say, for instance: "My friend Mrs. —— told me she has always hoped some day to be the owner of a hammock and a bottle of horseradish," or it might be a diamond ring and a pair of shoes, or some such combination. One man wanted a large business establishment and a pair of socks, another an elephant and a dill pickle.

After this a vote was taken (by ballot) to decide which costumes were most deserving of the prizes. The first prize was a neat little box containing one dozen fresh eggs, each one wrapped in delicately colored tissue paper. The second was a bag of apples. Only two of the guests made no attempt at "fixing up," which wasn't bad, considering there were sixty-five present.

By this time all were ready for refreshments. These consisted of squares of gingerbread and two doughnuts served in a paper sack, and coffee served in tin cups. The napkins were squares of white wrapping paper, the cream and sugar containers were old cracked relics set in a rusty dripping pan to be passed around—of course, tin spoons were used.

Altogether it was a most enjoyable time, and some of the guests expressed themselves as having "had a very hard time!"



Refreshments consisted of squares of gingerbread and two doughnuts served in a paper sack

The Hodge-Podge Party

(Second Prize)

Winner: Mrs. A. W. Snell, New York

SEND out invitations for a Hodge-Podge Party on odd scraps of paper and unmatched envelopes, with part of wording written in ink and part in pencil, or with two colors of ink.

For a party of twenty have five tables, four at each table. Select partners by matching pictures cut across in different shapes, and numbered for the different couples and tables. These are to be used as score cards, the winning couple getting a gold star each time, and progressing to the next table, changing partners each time.

Prizes can be given those who win the most stars, if desired—one for the boys and one for the girls.

Five minutes should be allowed for each game, and five minutes between games, to allow for change of seats and checking up scores. It is best to start and stop with a bell signal.

At the first table have the old-fashioned game of jack straws, which requires a skilled touch. At the second table an alphabet game is good. Cut inch squares of cardboard, and paint a letter of the

[CONTINUED ON PAGE 49]



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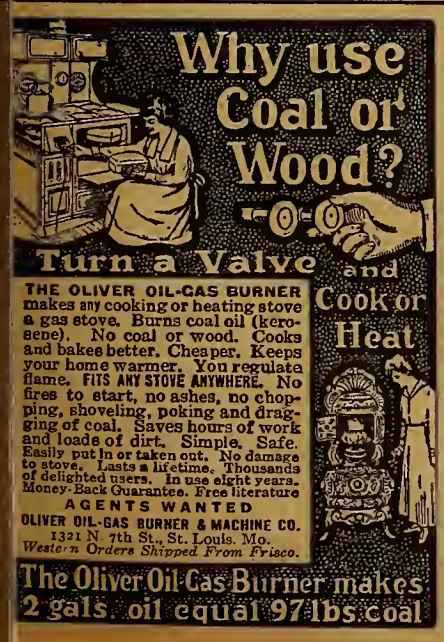
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What is Bred in the Bone

[CONTINUED FROM PAGE 41]

We rode over and met the hunted man. He came and greeted us naturally enough. We told him the news, and he did not express any surprise, saying only: "So Junkett is dead, is he? Well, I am proud to know it. I am proud to know that he is dead." He repeated this over and over.

"But there is a carload of deputies hunting you, Tom!"

"They won't take me alive!" was his fierce rejoinder.

Then I had to show him the folly of resistance, how it would be a crime, even though he were innocent, as I then thought, to kill an officer, and would surely ruin him for life.

"But what am I to do?" he demanded.

"Tom, do you believe that I am your friend?"

"I know you are, Joe."

"Then surrender to me and I will protect you."

He looked at me suspiciously, and I made haste to explain:

"There is no safety for you until you are in the keeping of the law. You are innocent. Our men will all testify that you were on the ranch when that killing was done. Now let me take you to the judge; you demand trial, present your evidence, get acquitted, then you are safe forever afterward. As sure as you remain in these hills your life is in danger, for these scared man-hunters won't try to arrest you."

He thought a bit, then surrendered, gave me his guns, and we rode toward camp.

On the way we found a right fresh bear track, made within an hour, and all thoughts of other things forsook us and we started in pursuit. Tom and I plunged into a deep, brushy canyon, trying to drive the bear around to the other fellows. As soon as we were well out of sight I said:

"Look here, Tom, this rifle is mighty heavy, and I won't carry it for you; besides, you are the one to kill that bear, if we do come upon him."

So he took it and on we trudged, talking of the events that had happened, and of the future. We came to a sunny bank and gave up the bear, and lay there resting and laying bare our hearts to each other for hours. Only on one dread secret was Tom silent. Then, as the shadows of night were falling, we emerged from the canyon, marched to camp, Tom a prisoner again, walking ahead, me with the guns.

No one had been there yet. We had supper, and, taking our blankets, Tom and I crept away down into a gulch beneath some aspen brush and made our bed, in just such a place as he had selected on that other unhappy night across the river. And next morning he went with me to the railway, we two armed with a paper signed by my foreman and all the men on the ranch, telling exactly where the man had been each hour for a week, and not mentioning that he had camped alone that one fatal night, and with no witnesses against him. He had a brief trial and was acquitted, for the sheriff could not say that he had recognized anyone, and was inclined to think that there was a gang of men at the camp.

And the man-hunters? They roamed the hills for days. They found not one trace of Tom or anyone else. Occasionally one would shoot at another across a valley, a long shot. They got lost, their horses went lame; they got hungry and sunblistered, and at last straggled back to the railway, and to the rest of their days will have adventures to relate of the time when they hunted the slayers of Junkett and the deputy.

And Tom? Vowing everlasting devotion to me, within a year he was stealing our calves and had corrupted every man I had, not excepting the foreman! For, verily, what is bred in the bone will come out in the flesh.

Nevertheless I feel saddened to know that my old comrade is in deep trouble again, and this time without probability of escape.

This story is literally true, which may not have any particular advantage to it, but it makes necessary the changing of names and places.

JOSEPH E. WING.

A dustless duster can be made at home by soaking old soft cloths in a solution of two quarts of hot water and a cup of kerosene.

Sensible women are making over old clothes because they realize that the materials in the old articles are better than they can buy now at three times the price.

If you want something to last 100 years go plant a tree.

If you want something to last 1000 years go plant a habit in a child.

If I were the mother of a little child— I would always remember this:

For a habit, well taught to a child, will no doubt be taught again to that child's children, and by them to their children, to continue for generations.



I'd use this dentifrice

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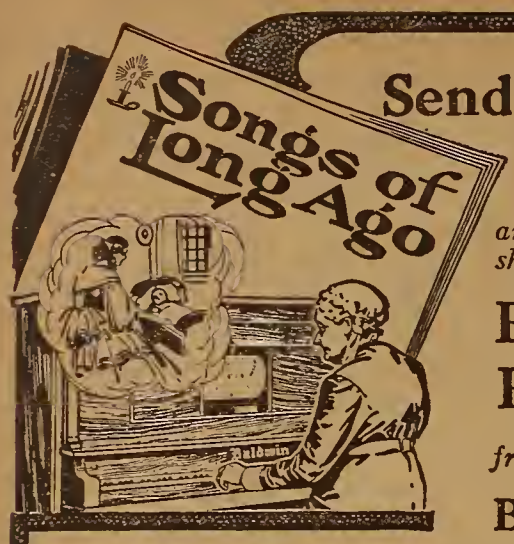
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Aunt Mollie's Household Accounts

By Grace E. Langdon

"HOW much did you spend in town to-day, Pa?" Aunt Mollie would ask as soon as she had cleared a place on the supper table to make room for her account book.

"Well, let's see—" Uncle Charlie would reflect. "I got a hair cut for a quarter, and Henry's overalls cost $1.50. Jed charged me 50 cents for fixing the harness."

"What about you, Mary?" Aunt Mollie would say to the next one at the table.

"I went to a movie with Cousin Jane—she paid for that, but I got some candy afterward. Fifteen cents' worth it was. And the lining for your new waist was 80 cents. The lemons I bought at the new store were 20 cents, and the other groceries are on this slip."

Aunt Mollie would write busily while each member of the family told her what he or she had spent during the day. Sometimes there wouldn't be much to put in her book, and again she would have a long column.

"What's the use of bothering with all those little things?" I asked her one evening as we started to clear off the table.

"They aren't little," she said, "not when you look at them as a whole. Sometimes you spend more than you ought for one kind of thing, and how are you going to know it if you don't have some way of keeping track? This way we can see where we are extravagent and where maybe we can spend a little more. Last year we had to buy a lot of canned stuff from the store because our vegetable garden hadn't been big enough the summer before. This year we knew about how much we would need, so we planned a much bigger garden. We bought more eggs during the winter than it was sensible to do, because I had no idea how many we would need or that the price was going up so. I'm going to put down a lot of them in water glass while they are cheap. Then with what I will save by these two things alone there will be more money ahead for a good winter overcoat for Pa and a new suit for me."

"That's just like keeping a budget and being really scientific," I said. "Know how much you spend for each kind of expense and then see if the proportion is anywhere sensible."

"Well, science or no science," said Aunt Molly, "I know we are saving money by it. Pa finds it easier to keep his farm accounts if he has some way of checking up the cost of the house and the expense of boarding the hired help. Most people don't stop to think of the value of the foodstuff the farm gives them either, but Pa always figures it in as part of his profits. But, of course, the only way you can tell how much the farm is giving you and how much you are buying is to keep accounts. Then the next step is to see where you can make the farm give you more and cut down the amount you have to buy."

I got out Aunt Mollie's book of accounts one afternoon to see just how she did it.

It was an ordinary day book with a stiff cover, about twelve inches long and seven inches wide. There were about 48 pages in it, and I suppose it hadn't cost more than 25 cents. Aunt Mollie had ruled it in columns, and had put a heading at the top of each.

Each item was entered twice, so that there was a running account of all expenditures as well as a classified arrangement. The totals of the different columns were carried over to the next page in each case and at the end of the month the totals for that period were entered in a page at the back of the book, so that the total for the year could be seen at a glance. This also allowed for comparisons of months and years. In order to save writing the headings on each separate page in her book Aunt Mollie had cut off the tops of a number of pages so that one set of headings served for all.

She had divided her expenditures into ten classes, and as I studied her book I found them to fall into groups something like this:

Animal Food—Meats, lard, fish, butter, milk, cream cheese.

Fruits and Vegetables—Fresh, dried, and canned fruits; fresh, dried, and canned vegetables.

Cereals—Cornmeal, hominy, rye flour, wheat flour, rice, bread, crackers.

Other Groceries—Tea, coffee, cocoa, baking powder, flavorings, spices, sugar.

Clothing—Suits, coats, hats, cleaning and repairing.

Household Furnishings—Furniture, linen, carpets, kitchen utensils.

Running Expenses—Fuel, light, ice, telephone, stationery and postage, accident insurance, life insurance.

Advancement—Recreation: Picnics, trips, fairs, movies. Education: Schooling for children, books, papers, lectures. Benevolence: Gifts, church, charity.

Incidentals—Doctor, dentist, medicine, tobacco, candy, barber.

Savings—Investments, savings-bank account.

"We must watch what we spend on those first three classes pretty carefully," explained Aunt Mollie, "because we don't want to spend money for things that can be grown right here on the farm. Last year Pa figured that we got 80 per cent of our animal food and 70 per cent of our fruits and vegetables from the farm. That's a pretty good record I think. Lots of farmers buy too much at the store when they could raise those very things at home much more cheaply. But you don't realize how much you are spending until you have a record of it in black and white.

"I keep track of the farm products used in the house in another book. In it I have such headings as poultry, butter, eggs, pork, berries, etc. Every few days I estimate the things I have used, and at the end of the month I total it up and calculate the cost at market price. This is the earning of the farm just as well as what we get for products sold outside.

"A lot of work for me? Oh, it really isn't a great deal—just a few minutes each day, and I'm always anxious to see how we are coming out."

The first double page in her book looked something like the above table.

HOUSEHOLD EXPENDITURES

Date 1919	Item, Amount, and Kind	Value	Animal Food	Fruits, Vegetables	Other Groceries	Cereal Products	Clothing	House Furnishings	Running Exp.	Advancement	Savings	Incidentals
Apr. 2	3 lbs. Coffee	1.20			1.20							
" 2	Shoes, Mary	4.50					4.50					
" 3	Strainer, sink	.25						.25				
" 3	Flower seed	.25										
" 3	Sack flour, 24 lbs.	2.40				2.40						
" 5	6 oranges	.30		.30								
" 5	1 lb. cheese	.25	.25									
" 6	War stamps	2.00									2.00	
" 7	Church	1.00								1.00		
" 8	Subscription to paper	1.25								1.25		
" 8	Telephone bill	2.00							2.00			
" 9	Hired girl, 1 week	7.00							7.00			
" 10	Movie, Pa & me	.20								.20		
" 11	Candy, Ma	.15										.15
" 11	Overalls, for Henry	1.50					1.50					
" 11	Sugar, 20 lbs.	2.00			2.00							
" 12	1 can sorghum	.65			.65							
" 13	Life Insurance	25.00									25.00	

TO MAKE CANDLES FIT—I endeavored to make candles fit candlesticks by holding the end of the candle over a flame until it softened. But frequently the wax dripped very badly, and only the outer layer of the candle would be softened. I have found a much more satisfactory way to hold the end of the candle in hot water until it could be forced into the socket of the candlestick. It is a satisfaction to have the candles fixed so they will not tumble out when dusted or, worse yet, when carrying lighted. *Mrs. H. B., Florida.*

The Hodge-Podge Party

[CONTINUED FROM PAGE 46]

habet on each. Have three sets of letters mixed up in a heap, the letter side down. en have a list such as this: 1. Vegetable. Fish. 3. Kitchen utensils. 4. Popular gs. 5. Books. 6. Names of towns. Wearing apparel. 8. Animals.

Each player, *in turn*, draws a letter and ns it right side up. The first one who s out the name of a vegetable beginning h that letter scores one for himself and tner. The couple scoring the highest nber wins. The next hand around the ject changes to fish, and so on until the is exhausted or time is up.

t the third table have a game of tiddledy ks, and at the fourth have two sets of ure puzzles, the partners first complet- the picture being the winners.

he fifth table should provide the most . Have a lot of old hats and millinery ming, with plenty of big pins. Here boys trim the hats with suggestions n the girls. Then the girls put on the s, and parade around the room to get es as to which hat is the more stunning.

or refreshments have a "hodge-podge d" made of spaghetti, canned tuna , pimentos, celery, and ripe olives, all pped together and mixed with mayon- e. Place a neat mound of this mix- on lettuce leaves, with a slice of red ato on top of that. A bit of mayon- e with a ripe olive gives it an appetizing h. Serve with cheese crackers or ines, nicely crisped in the oven. Hot colate with a marshmallow in each cup ce served with it.

A Unique Party

(Third Prize)

Winner: Kate Baker Knight, Michigan

"WHAT kind of a time did you have at Elizabeth's last night?" asked y's mother.

Just the jolliest kind of a time imagin- ! Betty is so original. She never does gs like anybody else. You know, she Edith Carlson gave this party together, we were all consumed with curiosity the moment we received our invita- s. You recall how the envelope was ed with a cat cut from black paper, two black cats decorated the head of sheet on which the note of invitation written? Just the wording of it led us xpect one of Betty's unique affairs. 't you remember, it read, "Two black invite you to spend the evening of ember tenth at The Elms, 203 High et." The girls showed me some of the s of acceptance they received, and they e quite as original as the invitation. k Leeson wrote:

'm glad to find I'm in good grace
With two black cats about this place;
And since I find I'm on their slate,
'll meet them on the given date.

Did they carry out the idea throughout evening, Mary?"

Indeed they did. During the half-hour e the guests were assembling, envelopes aining pictures of cats sliced in irregular ions were handed us, and we worked ther in little groups of twos and threes lace them correctly. This broke the and prevented any stiffness at the be- ginning. Soon after the last arrival we were each given a card about six inches square, decorated with two black cats, and containing a list of twenty short definitions describing some word the first syllable of which was 'cat.' Let me get mine and see if you can guess any better than I did."

Mary ran from the room and quickly returned with the card from which she read, "A waterfall."

"Cataract," replied her mother promptly. "That is easy."

"They made the first easy to encourage us, I guess. They are not all so simple. Let me read you several from the list just to show you what they were like: 'An unconscious state,' 'A great calamity,' 'An ancient burial place,' 'A beam at a ship's end.' No one had over seventeen of the twenty correct, but we had lots of fun figuring them out. If we had been allowed to consult the dictionary we might all have done much better. We were allowed twenty minutes in which to make our attempt, and then Betty read the correct answers and we checked ours. A pretty calendar with a picture of kittens on it was the first prize, while a copy of the 'Black Cat Magazine,' tied with black ribbon, was the consolation.

"Tables were now brought in, and for two hours progressive games followed. See our score cards?" and she dangled from her finger a cat about four inches high cut from black cardboard, with the eyes, mouth, and whiskers drawn in with white ink.

"It must have been a lot of work for somebody," said Mary's mother.

"Oh, the girls worked together getting things ready, and they said it was great fun. The plan was carried out in the dining-room, too. The cloth and napkins were decorated with black cats, and the cookies served with the ice cream were cut in the shape of cats. I don't see where they found so many different shapes, but there seemed to be no two alike.

"After supper we did one more stunt: Betty and Edith gave to each of us a large sheet of drawing paper and a stick of charcoal, and told us to illustrate the jingle we found on the back of our sheet. Mine was:

"Pussy cat, pussy cat, where have you been?
I've been to London to visit the queen.

"In a few minutes the girls collected our sketches and exhibited them one at a time, asking the audience to guess what Mother Goose or nursery rhyme the drawing was supposed to represent. If the sketch was so impossible that no one could guess it, the artist was compelled to rise and recite his verse. Some of them were very cleverly done, especially:

"Heigh diddle diddle, the cat and the fiddle,
The cow jumped over the moon.

"Ding, dong, bell, pussy's in the well.

"It certainly closed one of the jolliest evenings we've had this year," and Mary leaned back in her chair with a sigh of satisfaction.

"You don't mean to say that you came home without having played 'Pussy wants a corner!'" laughed her mother.

"Yes, we did," replied Mary. "The girls must have forgotten that, but they certainly thought of everything else."

Sweets for Thanksgiving

EANUT ICING—Two tablespoons pea- ut butter, two tablespoons thin cream, a drops vanilla, and confectioner's sugar. peanut butter, vanilla, and cream to- er, and add enough confectioner's r so that the mixture may be easily ad.

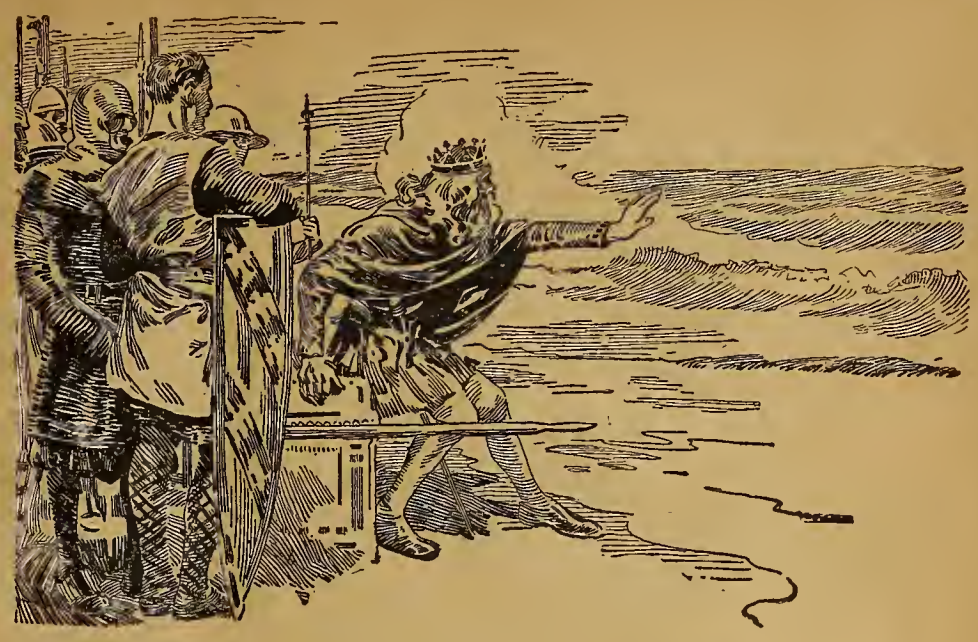
APLE CREAMS—Boil together two cups le syrup, three-quarters cup milk, and heaping teaspoon butter or oleomarga- . When it forms a soft ball in cold er, remove from fire, add one teaspoon lla, and set pan quickly into a larger containing cold water. Stir (not beat) l it thickens, and drop by spoonfuls on sed plates.

EANUT BUTTER BALLS—Put through food grinder one cup seeded raisins. with one cup peanut butter, one- th teaspoon salt, and one teaspoon lla. Form into small balls. Dip some em in melted bitter chocolate, and roll remainder in shredded cocoanut.

CHOCOLATE DAINTIES—Put through the meat chopper one-half cup each of dates, figs, and nut meats. Add one tablespoon orange juice, a little grated orange peel, and one square of melted unsweetened chocolate. Mold into balls, and roll in chopped nuts or granulated sugar. This mixture may be packed in an oiled tin, put under a weight until firm, then cut in any shape desired.

SUGARLESS, WHEATLESS, BAKELESS CAKE can be made by taking one-fourth pound each of cocoanut, figs, dates, nuts, and raisins. Wash the fruit and put through food chopper. Add cocoanut, mix all ingredients together, and turn into buttered tin. Weight down so that fruit will be tightly pressed together. Let stand several hours before serving.

I find this cake to be delicious and suitable to serve as a dessert at dinner or luncheon. It can also be served with tea at afternoon tea, and takes the place of candy to a large extent.



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Economy Candy Dept., Box 438, Mattoon, Illinois



The Pell Street Rejuvenator

[CONTINUED FROM PAGE 44]

"Just one; why?"

"I want you to make it two. Take me along, and I'm your debtor for life."

"I'd have to wire to Chicago," said Mackenna with interest.

"Do it now," urged Potter. "Then we can make an evening of it."

They made an evening of it, and also a night and a good deal of a morning. At Hector's cabaret they became unaccountably attached, about midnight, to a blond soprano vocalist and a vivid little Spanish dancer in a snake-like costume of green and silver spangles, as well as to two awe-stricken tourists from the West, who were in search of instruction in the fabled wickedness of New York. Mr. Potter was the soul of the party, which was marked by much youthful abandon—so much that he entirely failed to notice the entrance of Veronica Cullen and the detested Piddock.

If he had known that Veronica was present, Mr. Potter would not have permitted the Spanish dancer, who bade him good night from the fourth step of the balcony staircase, to clasp him ecstatically around the neck and kiss him in large and public fashion on the forehead.

But, having accepted this compliment in the spirit in which it was offered, and turned away from the balcony staircase to confront the scandalized Veronica at the first table on his way to the cloak-room, Mr. Potter's emotions distinctly did not include remorse. He bowed to her, indeed, with a sort of triumph.

It was not until the middle of the following day that Jonathan Potter awoke to the fact that the main portion of his bank roll was no longer in his pocket. He remembered with sudden comprehension the rather abrupt farewell of the ingenuous tourists from the West. But even this loss was of small moment beside the ghastly general wreckage of an existence no longer colored by the Rejuvenator.

He surveyed himself in his shaving glass, and saw a seared and melancholy reprobate whose liver was swelling into a dromedary hump. He eyed the resurrected Indian clubs with disgust. He found the green glass bottle with the Chinese characters, and kicked it viciously under the table.

Two letters confronted him on his breakfast table. He imagined the contents, and shuddered.

It was not until after his second abortive attempt at breakfast that he took up the letter from his firm and opened it with a groan.

At the first glance his eyebrows climbed into the roots of his hair. It was signed by the junior partner, and it ran:

Dear Potter: I am sure you will have reconsidered by this time your very hasty and entirely unnecessary decision of this afternoon. An association of ten years, so mutually pleasant and valuable, should not be so lightly broken.

Call it a holiday instead. Take a month at our expense, and come back prepared to discuss the question of your appointment as general manager with a proprietary interest.

We have had the idea for some time, but it is only lately that we have become convinced of your ability to infuse into the work the youthful vigor which is so eminently desirable.

Youthful vigor! Poor Jonathan Potter glanced just once at his reflection in the buffet mirror, and reached miserably for the note from Veronica. It was briskly businesslike:

Dear Jack: Don't be a *fool!* Piddock was only to wake you up, and he seems to have had that effect, though not quite in the way intended. It seems that you have been showing me only your dreary side, which isn't fair. I shall be alone to-night. Come without fail. I simply won't lose my *dearest* friend through perfectly *idiotic* misunderstanding.

Always yours, V.

Potter leaned wearily back in his chair. The diabolical Rejuvenator had produced effects marvelous indeed, but pitifully transient. It had placed within his reach everything that made life worth living—only to snatch it cruelly away overnight!

There was only one thing to do. He must offer every dollar he possessed for more of it.

An hour later he entered the establishment of that mysterious Pell Street magician. He clutched in a feverish hand the empty green bottle. Mr. Wash Jin came forward, smiling ecstatically.

"You savvy makee-young stuff?" began Potter, exhibiting the bottle. "Wanchee more all same like this—"

At the first glimpse of the bottle Mr.

Wash Jin's manner changed, likewise his speech. He snatched the thing from Potter's trembling fingers.

"Aw, cut out the fool talk," he said. "Do you think I don't speak United States as good as you? Why, you must be the same crazy mutt that put my best trick on the fritz. I've a good notion to— But you don't look like him, exactly."

He considered the anxious customer plainly puzzled by the absence of a mustache.

"I'll pay any price you like," pleaded Potter abjectly, "and I'll buy all you can get. It's wonderful stuff! It made me ten years younger in a night."

"You wanter tell me you drank it?" demanded Wash Jin incredulously. "Why it was nothing but a little alcohol and rice powder—what ladies put on their faces to give them a peachy complexion! And that was why you made me let my best customer down, that wanted the trick for the evening performance at the Palace!"

"You mean that it was nothing but a conjuring trick?"

"Of course! Where do you fancy the dopes that do Chinese magic on the stage get their stunts? They have to come to me. And that bottle was just the right size and weight. Say, on the level, you know, honest to goodness—ain't you?"

He shook his head in weary reproach. But Jonathan Potter's despairing features were being slowly transformed by a new and luminous hope.

"Why, it was nothing but faith that did it!" he cried. "I wiped off ten years of my age just by wanting to! Don't you see? I can do it again whenever I like, without paying anybody a cent—there's no reason on earth why any man should ever feel old."

Wash Jin carefully returned the green bottle to its cabinet before he replied:

"I could have told you that in the first place," he said, with a pitying smile. "Mildewed stuff! Why, we knew that in China five thousand years ago!"

Do You Know Davy Allen?

WE HAVE an idea that you folks don't care much for a long-drawn-out continued story. So we're not going to run any more of them unless you really want them; and we'll depend on you to let us know if what we do doesn't suit you.

But we think maybe you would like several two and three part stories—that is, long stories printed in three big installments. How about that?

Just on the chance that you will think well of the idea we have bought one from Samuel A. Derieux, who wrote "The Sheep Killer" and "The Call of Home" for you a couple of months ago. This three-part story of his is called "The Amazing Adventures of Davy Allen," and it's first and last the real story of a real boy with a real mule, who gets mixed up in the love affairs of a nice girl and two young men who happen to be down in Davy's part of the country on a hunting trip. There's a real mystery about the disappearance of the girl in the first installment, and Davy is the hero of that occasion, in a very unusual way.

Does it sound interesting? If it does, look for the first installment next month.

THE EDITOR.

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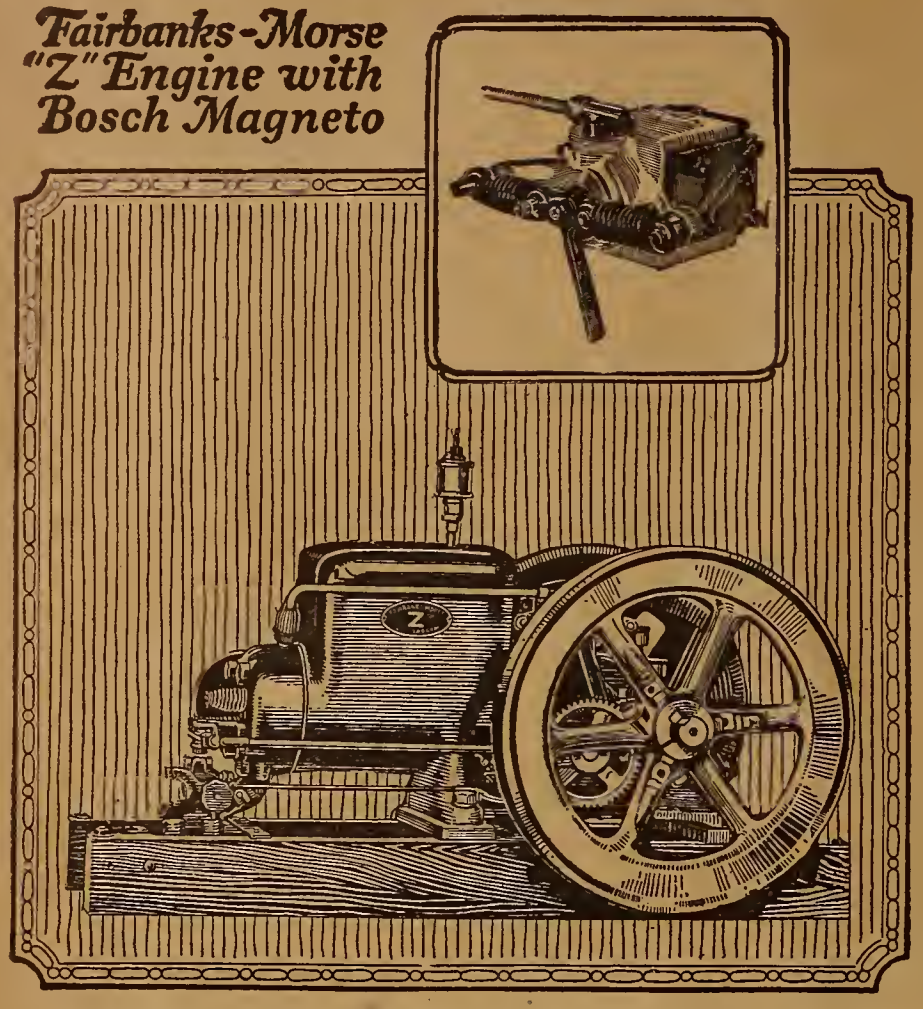
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What Does Your Wife Do to Help You

[CONTINUED FROM PAGE 10]

peanuts. The foul land required constant hoeing, but they kept at it, even when the cotton drooped under the hot sun and they decided that they would probably have to sell the milch cow in order to live. They raised chickens for food, and made over their old clothing. The daughter joined the local canning club, planted one-tenth acre to tomatoes, and bought 500 tin cans. To insure the success of her crop, on which so much was at stake, she dug with a post-hole digger holes 12 to 14 inches deep, filled the bottom with rotted manure, and planted her tomatoes in them. The tomato plants were staked up and kept pruned, and were the wonder of the neighborhood, as they grew from 8 to 9 feet high, and were covered with fine fruit throughout the entire season. She sold and canned for home use 2,500 pounds of tomatoes, and won a number of prizes at the local and state fairs.

The mother joined the Home Demonstration Club, and put out a large garden where she grew enough potatoes, lima beans, peas, etc., to last for a year. All of the surplus was either sold or preserved for home use. After harvesting their crops, mother and daughter helped their neighbors finish their cotton crops, and averaged $5 a day picking cotton.

In December the mother came into the office of the county agent—who by the way is a woman—and told the story of her success.

"I have paid my mortgage off to-day," she said, "and have a deed to the land. We have about $200 left to clothe us, and also sufficient food supplies to last a year, with the exception of flour, sugar, and coffee. Then we still have our cow and chickens."

There was nothing for the county agent to do but tell her that she was the pluckiest little woman in the world, and that she deserved a gold medal. Then they planned things for the coming year, and the outcome of those plans will be a neat little five-room bungalow, with outbuildings to correspond, on the 40-acre farm. This is only a typical example of thousands which might be noted showing what home demonstration has done for the South.

First in Knapp's scheme comes production, then economy and thrift, and last, but not least, health and happiness, which are pretty sure to follow where the other two have been attained. And in summing up he drew some interesting conclusions which we all might do well to consider. He said:

"Why not let your wife have charge of all the by-products of the farm? She will take more interest and will be more apt to see that they are properly attended to than you will, because you are too busily occupied with the big things of the farm, while she has time to think about the little ones.

"If she knows how the garden should be cared for, she will see that John or the hired hand does the work when it is needed. The same thing applies to the orchard and the dairy. If she uses her head in making these enterprises successful, she will not only add materially to the income of the farm, but will also be happier, because she knows her work really counts for something."

All of which suggests to me the thought that it might be to your mutual interests as husband and wife to get together some evening and draw up a simple business partnership plan. Make a list of the various kinds of work there are on your farm, then separate them into things Husband is to have charge of, and things Wife is to manage. If there are grown sons or daughters, give them a share in it—a *money* share as well as a *work* share.

The great value of such a plan, it seems to me, is that it will *fix responsibility* for certain definite things. And there is nothing that inspires to real good work like responsibility.

This idea, I think, is peculiarly important on the farm, because your home life and your business life are all thrown together. Husband and wife are necessarily business associates, as well as personal companions; and if the experience of those Southern women proves anything it is the importance of the wife knowing the things she can do to help most, and doing them.

Money in the bank is one safe investment; another is green crops turned over.

Dead black cats are lucky for grapevines. To get best results bury the cat near the roots of the vines.

How MacBurgess Won With Potatoes



David MacBurgess

MACBURGESS—MacBurgess, the potato man. Ever hear of him? No, perhaps not. There are other and larger potato growers, and so, in the hurley-burly, time has forgotten to transfer his name from the journal of success to the ledger of fame.

He has traveled the long rough road from Nowhere to Somewhere—MacBurgess has—and from piles of potatoes has gathered piles of dollars.

MacBurgess is a Scotchman, and his State is Kansas.

The sandy soil between Kansas City and Topeka was made for potatoes, or potatoes were made for it—put it the way you like.

MacBurgess was born in Scotland, came to America, drifted to the country, and hired out by the month on a farm; and while he worked he studied—studied potatoes.

With his savings MacBurgess rented and planted a few acres, and with his earnings he bought these acres and rented more.

There is a difference between the education we have thrust upon us and the education we acquire.

MacBurgess acquired his.

Soon he knew a great deal about potatoes, as well as other things.

He kept on keeping on—the only way to reach success—and each year recorded more acres in his name, more men in his employ, more labor-saving machines in his use, and bigger piles of potatoes in his fields.

Something more than a quarter of a century has slipped by since MacBurgess drifted to the country looking for a job.

To-day it takes five, maybe six, figures and the respect and good-will of a large community to measure his riches.

Back in the past there were years when potatoes brought little more than the cost of their digging.

Like smiles and tears, success and failure are closely connected, and the one is often mistaken for the other.

The men all about him were thinking potatoes, studying potatoes, talking potatoes, and raising potatoes; but MacBurgess stands out because he started from Nowhere and arrived Somewhere, just as will any man who substitutes "can" for "can't" and mixes a little gray matter with a lot of dirt, be the crop potatoes, wheat, corn, or what not. HELEN ARMSTRONG.



Spend Your Evenings in Egypt This Winter

N the evenings this winter when your day's work is done, suppose - you forget the tiring modern world a while, and spend a little time in ncient Egypt.

ingle with its people in their strange rriage customs and their gorgeous ligious processions: listen to the ssip of ambition and intrigue that vers about the court. Impossible, u say? Not at all: you can do it rough the fascinating pages of erodotus.

perhaps you will want to journey ong the Fuegians with Darwin. hen famine threatened them the egians ate their old women first, and dogs afterwards. "Doggies catch otters," they said, "old women no."

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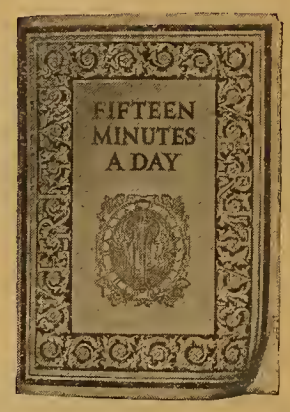
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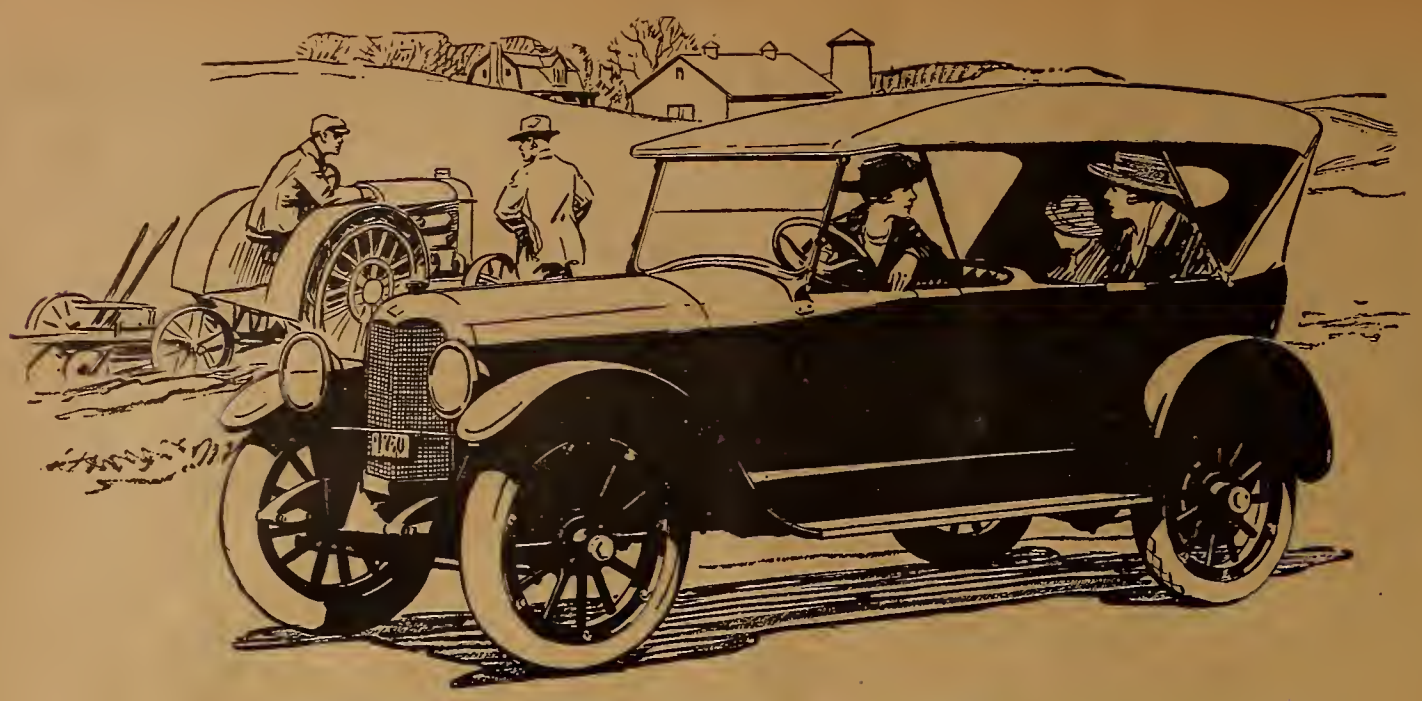


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Introducing Mary and Martha

MARY and Martha Cooper, twin sisters of Cadiz, Ohio, are sure enough farmerettes. In this picture you see them as they looked after exploring the woods for blackberries, and you can see that both their buckets are full and running over with juicy berries. They also deliver milk for their father, who is a dairyman living in the outskirts of the town, and collect for it too. A. B. Warfel, a neighbor who sends us their picture, says that they generally have a smile on their faces, and that they will probably smile more than ever to see their picture in print. Who wouldn't be glad to have such smiling milkmen calling at their door every morning? We don't know which is Mary or which is Martha, but we are glad to make their acquaintance anyhow. A. S. W.

The Farm Loan

[CONTINUED FROM PAGE 6]

Federal Reserve Bank of Chicago, a securing federal reserve notes to supp his customers. Other industries, throu the federal reserve, are furnished capi up to 90 per cent of the value of th security to supply their needs. Has an one started the cry that our federal serve banks are facing calamity becau of this? No, and no one can truthfu say that the Federal Farm Loan syste doing business with farmers produci $10,000,000,000 worth of produce annual would face ruin if it should raise its lo limit up to $25,000, this answering t financial needs of thousands of farmers.

We must remember that agriculture the indispensable industry of Ameri This farming business cannot be satisf torily carried on by the old slipshod har to-mouth system of farm loans; in fa the old system cannot be dignified with t name of system at all. Our farmer, w choice, stable land security, is not aski the Federal Farm Loan system for chari he is asking for his right.

If bankers find themselves in need additional funds to supply the short-te needs of their customers, they can sel from the files certain notes, take them the federal reserve bank of their distri and obtain in return federal reserve ba notes in any quantity they desire or entitled to.

By the same token, our farmers are j as fully entitled to ask the Government supply machinery, to supply them wit market for their security, founded on fi mortgage on farm lands, which is choicest security in the world.

There is a movement now on to ask C gress to amend the Federal Farm Loan so as to provide the sum of $25,000 as maximum loan. This will prove no ha ship to those desiring the same average loan as now being closed under the $10, plan, and will place the system in a posit to serve thousands of farmers requir between $10,000 and $25,000 amply finance their farm operations.

If you think it is worth while, it mi be good business to write your represer tive at Washington, requesting him exercise his influence toward securing amendment immediately.

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STATEMENT of the ownership, management, circulation, etc., required by the act of Congress of August 24, 1912, of Farm and Fireside, published monthly at Springfield, Ohio, for October 1, 1919. State of New York, County of New York.—ss.: Before me, a notary public in and for the State and county aforesaid, personally appeared Walter H. Brown, who, having been duly sworn according to law, deposes and says that he is the Assistant Treasurer of The Crowell Publishing Company and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit: 1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, The Crowell Publishing Company, Springfield, Ohio; Editor, George Martin, 381 Fourth Avenue, New York, N. Y.; General Manager, George D. Buckley, 381 Fourth Avenue, New York, N. Y. 2. That the owners are: (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.) American Lithographic Co., New York, N. Y.; Denny Pomroy & Co., New York, N. Y.; Louis Ettlinger, New York, N. Y.; Ella Gardner Hazen, New York, N. Y.; George H. Hazen, New York, N. Y.; Joseph P. Knapp, New York, N. Y.; Florence Lamont, New York, N. Y.; Arthur H. Lockett, New York, N. Y.; Antoinette K. Milliken, New York, N. Y.; John S. Phillips, New York, N. Y.; Pomroy Bros., New York, N. Y.; Ida M. Tarbell, New York, N. Y.; J. Walter Thompson, New York, N. Y.; Irwin Untermyer, New York, N. Y.; Alvin Untermyer, New York, N. Y.; Alvin and Irwin Untermyer, Trustees for Irene Meyers Richter, New York, N. Y. 3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None. 4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon npany but also, in cases where the stockholder ppears upon the books of the company as trus- fiduciary relation, the name of the person or m such trustee is acting, is given; also that the is contain statements embracing affiant's full f as to the circumstances and conditions under and security holders who do not appear upon mpany as trustee, hold stock and securities in n that of a bona fide owner; and this affiant has : that any other person, association, or corpora- t direct or indirect in the said stock, bonds, or n as so stated by him. 5. That the average f each issue of this publication sold or distrib- ails or otherwise, to paid subscribers during the g the date shown above is—— (This informa- m daily publications only.) The Crowell Pub- Walter Brown, Assistant Treasurer. Sworn before me this 24th day of September, 1919. hkin. (My commission expires March 30, 1921.) tement must be made in duplicate and both the publisher to the postmaster, who shall send hird Assistant Postmaster General (Division of shington, D. C., and retain the other in the files The publisher must publish a copy of this state- issue printed next after its filing.

PEACH & APPLE TREES WHOLESALE PRICES TO PLANTERS

Small or Large Lots by Express, Freight or Parcel Post. Pear, Plum, Cherry, Small Fruits, Berries, Grapes, Nuts, Shade and Ornamental Trees, Vines, Shrubs. Catalog FREE. TENN. NURSERY CO., Box 35, CLEVELAND, TENN.



Write for **New FREE Book!**

A Kirstin One-Man Stump Puller instantly gives you a GIANT'S POWER—makes you master of any stump! Many Kirstin owners pull stubbornest stumps in 4 to 10 minutes! AS CHEAP as 5 CENTS per stump!

Kirstin One-Man Stump Puller

Just a few pounds on the bandle means tons on the stump. When stump starts, throw machine into high speed and out comes the biggest stump, roots and all. Positively no other machine like it. Has special, patented features. Recommended by leading Agricultural Schools and Forestry Bureaus. Why have stumps when you can now pull them so easily, quickly and cheaply?

Six Months to Pay

To prove these claims, we will ship you any size or style Kirstin on THIRTY DAYS' FREE TRIAL—not one penny in advance. If pleased, keep puller. If not pleased, return at our expense. You don't risk a penny. Four easy ways to pay.

Kirstin pullers at low prices. One-man style or HORSE POWER—all sizes. Three-year guarantee with each machine.

WRITE! Don't endure profit-losing, pesky stumps any longer. Send postal now for most valuable Stump Puller Book ever published—pictures—prices—terms—letters from Kirstin users and all about our Special Proposition—all Free. Write!

A. J. KIRSTIN CO., 2103 Lud St., Escanaba, Mich.

Feed Them Milk?

a man feeds an abundance of milk in connection with green stuff, he is a nner," declares W. R. Graham, the tario Agricultural College poultry ex- t. Graham has a reputation second ly to that of Dryden, Rice, Lewis, Dr. arl, and possibly one or two other Ameri- poultry investigators, and his con- sions can be depended on. Not only growing children, as Dr. McCollum has nonstrated, require milk foods, but cks do too.

So W. R. Graham's way of raising chicks nd it is a mighty successful way— orously emphasizes these "growing nciples." A visitor to his well-managed ltry plant found growing chicks busy buttermilk troughs. They lived in well- ntilated colony houses scattered over an ensive range, and a flourishing field of lfa, very popular with the stock, dered near. From the day of birth, ctically, these chicks had consumed h feeds. It was inevitable that they uld be "growthy."

Milk can be used by poultry keepers in ious forms, depending on local supply ditions. Sour milk, sweet skim milk, rinsings, and buttermilk are better wn than the powdered milk, a new mercial product. It is put up in big mery centers and shipped all over the ntry. For use it is simply dissolved.

ould Farmers Advertise?

[CONTINUED FROM PAGE 5]

he farmer owes it to himself, to the and to the consumer to bring about a e of mind among consumers which matically will make it impossible for n to talk about "the profiteering ner" when there are.

here is only one way to insure this e of mind, only one way to insure the l will of the man who buys a cut of t or a peck of potatoes:

ake him into your confidence.

ell him the story of production. It is nderful story. In agriculture you have greatest romance of all time.

ow him what it costs to raise your el of wheat or peck of onions; you have rs entering into these costs which ld stagger a bank examiner.

xplain why you grow for him a barrel erfect yams instead of a barrel of culls; he matter of quality production you a story as full of thrills and wonders hat of any breeder of rarest orchids.

ake him feel a personal pride in his rstanding of the business of farming.

ou say, how? Your plants are scat- l; you have no guides to conduct him ugh; seldom does he come your way. are handicapped.

one sense, yes; in another, no.

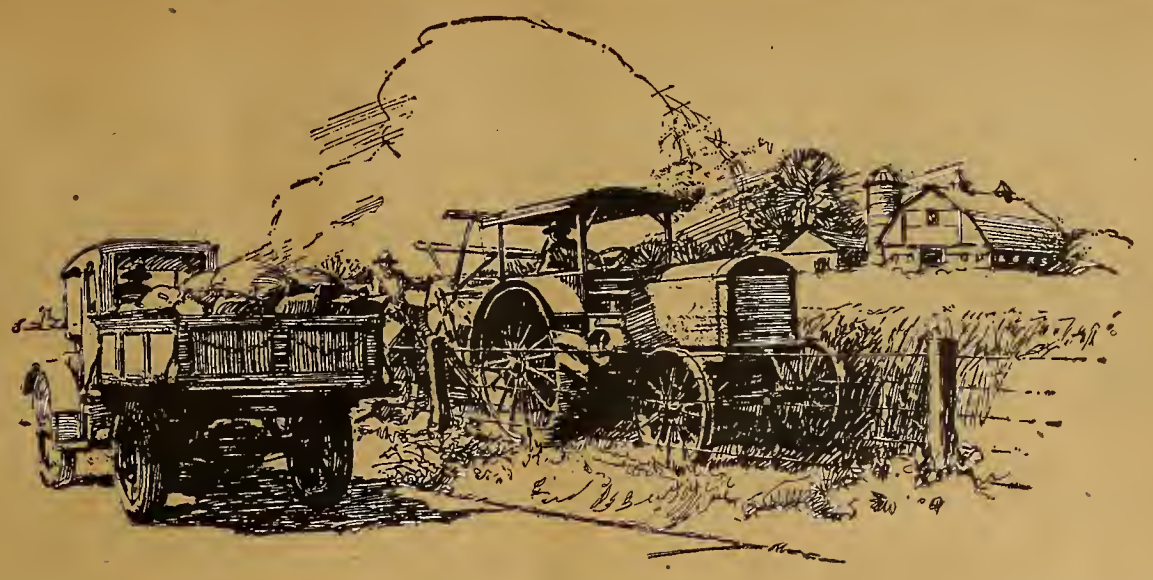
our plants *are* scattered, and there is he uniformity in production processes he farm which he will find in the auto- ile plants—farming cannot be stand- ed. But the public, *your* public, must . It does read. It will read your story. t agriculture in competition with man- uring for a share of his thought at breakfast table as your consumer re- s the news; compete with the packers daily are telling their story to your mer's wife. He would not visit pack- lants for this story, so the *packers take him!*

ey advertise—everybody does. Yet have as much to advertise as you. your advertising you have no need atchpenny tricks; you have an unlim- wealth of facts which are new.

is is the psychological moment for the iment; never were all things so ready. t don't misunderstand. This maga- has nothing to gain by your advertis- We don't want you to advertise with FARM AND FIRESIDE, or any other publication, would be the wrong for you to advertise.

ur local newspapers, county and state papers, and magazines of general char- which reach the city consumer are the you want. And this is no special plea he magazines either. Most of them are any good have more advertising dy than they are equipped to handle. is advertising idea, it seems to us, d be handled by your state or national ization, if you should decide to do ing with it. And your campaigns d be mapped out for you by experts in dvertising business, on the basis of acts you give them.

small personal contribution from each would make a big state and national And the campaign it paid for would tionize the present stupid public sen- t against the "profiteering farmer."



How machinery has made it possible to produce food cheaper

We have just threshed one of the largest wheat crops in our history. Ever stop to think how impossible it would have been to grow those 915,000,000 bushels without modern, back-saving machinery?

The tractor never tires. A binder does the work of a hundred scythes.

Machinery has made economical, labor-saving agriculture possible.

The American farmer has found that he can do twice as much work with it—and do it cheaper. Every farm has several hundred dollars' worth of equipment on it.

It is the same way with the packer.

From knife and saw methods his equipment has grown until it takes many buildings to hold all his meat dressing machinery.

The packer, too, has multiplied his capacity. His modern equipment—like the farmer's—gives him ability to dress many more cattle and do it cheaper.

The difference between live stock and dressed meat prices has been narrowed. Swift & Company's profit—a fraction of a cent per pound from *all sources*—is too small to have any effect on live stock or meat prices.

All of which shows that big scale machinery pays—both on the farm and in the packing plant.

Swift & Company, U. S. A.

Founded 1868

A nation-wide organization owned by more than 30,000 shareholders

HIGH Pressure SPRAYERS 38 Years Experience

Ospraymo Catalog Free

With special features all their own, They claim your kind attention. In every size . . . . for every zone, They furnish *sure protection.*

FIELD FORCE PUMP CO. Dept. 39 Elmira, New York

"USEEKO" INDOOR CHEMICAL TOILET

ODORLESS SAFE SANITARY

No plumbing needed; place anywhere—in a closet, hall, attic, bedroom, under stairs, etc. Takes floor space 16 inches square No sewer or water connection required; made of steel, rustproof, grey enameled finish, seat and cover golden oak, durable, handsome, lasts a lifetime. Shipped on approval complete with pipes, accessories and chemical all ready to install at the remarkably low price of **$9.79**

Money Back Guarantee

Have comfort this winter, avoid exposure, protect family's health. Toilet emptied every few weeks anywhere same as ashes, as chemical eterilizes and makes contents odorless. Get one today on our guarantee of satisfaction or money back.

U. S. SANITARY SPECIALTIES CORP.
1317 Fulton Street Chicago, Ill.

Watts' Famous Corn Shellers!

NOW SOLD EXCLUSIVELY BY US

$69.50 for Watts' No. 4 with Cob Stacker and Grain Elevator.

$89.50 Buys the Watts' No. 4 Corn Sheller with automatic feeder as illustrated. 75 to 125 bu. per hr. with a 4 H.P. to 6 H. P. engine. Order No. KB-902



Buy On Your Own Terms!

Here's Big News for America's Corn Growers—Our Fall announcement and your best chance to own a World's Famous Watts' Corn Sheller in any size—small, medium or large capacity. We are now able to offer them at Big Cut Prices in all sizes, under most liberal terms with a 60-Day Free Trial and a guarantee of complete and lasting satisfaction. All other sizes are offered at equally big reductions.

Watts No. 1. **Corn Sheller for the man who shells** corn only for his own use. Capacity 50 to 75 bushels per hour with a 3 H. P. engine now **$34.50. Order No. KB-900.**

Watts No. 4. **Corn Sheller with cleaning system,** cob stacker and grain elevator **$69.50. Order No. KB-901.**

Watts No. 7. **Corn Sheller with standard equip-** ment including wagon box, grain elevator, corn stacker, type "R" feeder, on steel trucks. Capacity 200 bushels per hour, now **$265.00. Order No. KB-903.**

Watts No. 8. **Double Cylinder Corn** Sheller for custom work. With standard equipment, wagon box elevator, swivel cob stacker and feeder on steel trucks. Capacity 600 bushels per hour, now **$390.00. Order No. KB-905.**

Write today for Free Watts' Corn Sheller Book No. KB-77

HARRIS BROTHERS CO. Dept. KB-28, 35th AND IRON STREETS CHICAGO, ILL.



Offical Photo 24476 The Amex tie Mill, 20th Engrs., France

95 "American" Mills Like This Made History in France

COL. J. A. WOODRUFF, 20th Engineers, said in offical recognition of these "American" Mills (named Amex Mills by the Forestry Division):—"When ties were called for in large quantities to support the advance of our troops at St. Mihiel and the Argonne, they were *ready!*" The distinguished services rendered by 2000 "American" machines in the forests of France, and at Ship Yards and Cantonments, won from the War Department a citation for a Certificate of Merit.

Now we are ready again to fill orders promptly for "American" Portable Saw Mills to help reconstruction on the farm. Saw your own lumber and save money. What you don't need, sell to your neighbors. Saw for them at good prices. There are woodlots around you if you have none of your own. Get the dollars out of these trees with a *still better* "American" Portable Mill, improved through War experience. Easy to move and anyone can operate. Famous for quality for years.

Write for Free Illustrated War Book and Catalog

The Nearest Distributor Listed Below Will Supply "American" Mills Promptly

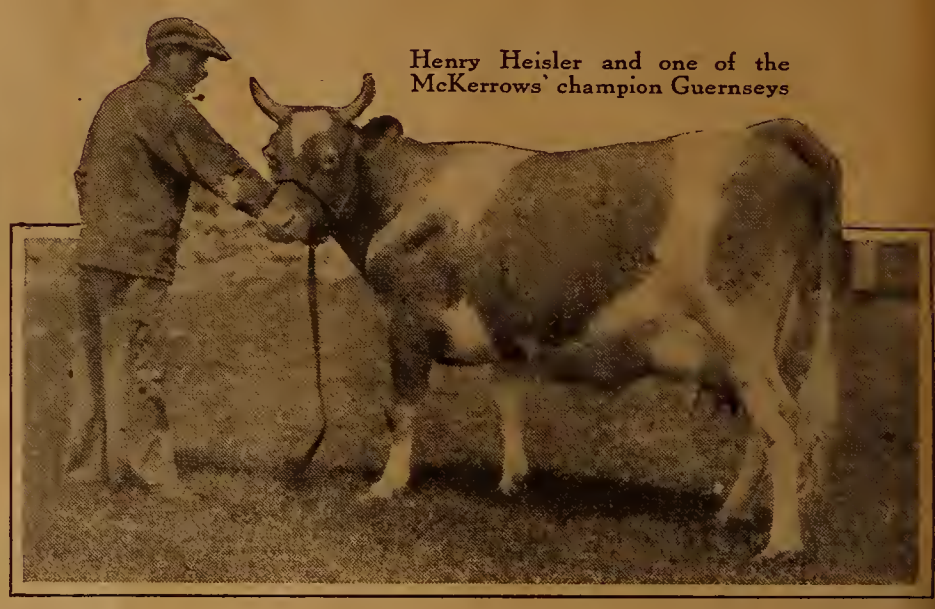
Chicago—American Saw Mill Mchy. Co., 162 No. Clinton St.
Seattle, Wash.—Higgins Mchy. Co.
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American Saw Mill Machinery Company, 1394 Hudson Terminal Building, New York City

American PORTABLE Saw Mill

Boy Herdsman Who Made Good

By W. A. Freehoff (Wisconsin)



Henry Heisler and one of the McKerrows' champion Guernseys

ONE of the pleasantest facts in connection with the advancement of live-stock husbandry is the number of boys and girls who are taking hold to such good purpose that their achievements rival those of adults.

Henry Heisler, herdsman of Geo. McKerrow and Sons Company, Pewaukee, Wisconsin, is such a boy. He is only fifteen years of age, but he is in full charge of the splendid herd of Guernseys the McKerrows are building up. One cow under his care has made over 71 pounds of fat a month, and others are making around 60 pounds.

There was a certain cow in the herd which had already made a good Advanced Registry record, and Gavin McKerrow, the manager, did not wish to run her again. The boy insisted the cow be given another chance.

"All right," said Gavin, "if you get her up to 50 pounds of milk a day you can run her."

Young Heisler immediately got busy and now is running the cow with every prospect that she will greatly increase her former record.

Henry Heisler did not set out to be a stockman. When fourteen years old he ran away from his home in the Dakotas, and went to Milwaukee, where he had relatives. Too independent to "sponge" off his relatives, he went to an employment agency and secured work on a Waukesha County farm.

He finally came to the McKerrows where for a month he made himself useful. When the regular herdsman left, Heisler asked for a chance to qualify. He was a mere boy to have such an ambition, but he was given this proposition:

"We will start you at $15 a month, and every month that you make good we will raise you $5 until you are getting $50 and your board."

The $50 goal has long been reached, and the boy is still making good.

He Saved By Storing

By J. T. Bartlett (Colorado)

THERE is something of permanent value in the experience of a Northwestern apple grower who did not ship his 1918 Yellow Newtowns until last spring, when they were seasonable. He marketed three cars, including a few Spies and Baldwins, and he received the highest net price ever paid for a single car of apples in his district. The top-price car contained 720 boxes, and netted $2,112.75. Sizes 100 to 150 brought $3.50 a box, net; sizes 64 to 80, $3.25. Cull grades netted the sum of $1.50 a box.

It is not the practice in this locality to store apples extensively, and the bulk of the spring varieties are shipped from the orchard farms in October and November. A comparison of returns is interesting. In this same market which netted the man who stored $3.50 a box on best grades, Yellow Newtowns were last November advertised for $3 a box at retail. The jobber sold for $2.65, of which 38 cents was freight, and the grower sold for $2. The grower got a profitable price, but one which didn't hold a candle to the returns of the Yellow Newtown man who stored.

The man who hasn't proper storage facilities, and endeavors to store, often comes to grief. The out-and-out speculator often does, also.

But conditions in this man's particular market represented a genuine selling opportunity. Storage facilities both in growing districts and market regions did not begin to match the size of the apple industry. Consequently, great quantities of winter and spring apples were forced on the market in late fall. The grower put the problem up to the wholesaler, who in turn diverted supplies to the retailer with the result that the crop of Newtowns, Winesaps, Ganos, and some other varieties was in large part forced on the consumer out of season.

What progressive individuals have been doing for some time, big organizations of growers are either preparing to do or have actually started. During the past year, at a goodly number of points in the Northwest, fruit growers have either built their own storage warehouses or have acquired possession of private warehouses. There is a very definite disposition, too, to "feed the market" in a clever manner, with maximum consumption in view. Thanks to national advertising, the "apple calendar" of one big Northwestern fruit-marketing concern is already becoming familiar to consumers. This calendar specifies the various varieties of apples in season at any particular time, from fall till late spring.

MUCH of the high cost of living is due to the fact that many folks depend on others to do things that might better be done by themselves.

Stumping at "76"

A NOVEL method of clearing a field of stumps is described in the following letter from Miss Henrietta M. Worsham of Seventy Six, Missouri:

"I had purchased a steam-pressure canning machine, but didn't have any land on which to raise the tomatoes with which I had hoped to make my canner a profitable investment. Eventually I persuaded my family to let me have the use of a two-acre strip that had been cleared off during the winter. I managed to roll the logs together and either burn them entire or in small enough pieces to allow me to roll them entirely off the land. But the stumps stood so thick that the land was practically useless.

"Coming in the house one day I found my mother lamenting over the number of holes in the bottom of the heater that was being taken out of the dining-room. I asked for the stove, and was given it, with a lot of questions and wondering looks. I hacked the bottom out of it and carried it out to my new ground and set it over a stump. It worked fine. I put on a joint of pipe to keep the sparks in. It burns the air out quite a distance into the ground, and does even better when I dig a hole through under the stump next to the taproot, as that seems to draw better. And speaking of drawing, everybody knows how a heater can draw. Of course, the stump has to be chunked up, and it isn't very fast work, but I find I can burn out any stump that the stove will fit down over, and do it well and safely."

Dayton Airless



Puncture Proof AND Easy Riding

Put Dayton Airless Tires on your car now and forget punctures, blowouts, pumps and patches. Seven years of service has proven their success and reliability. Over 100,000 are in use today. They don't bounce like a tight pneumatic nor d-r-a-g like a loose pneumatic. They are easy riding—and wear till there's nothing left but shreds.

Equip Your Ford

or any other car using 30x3 or 30x3½ sizes. No spare tire needed. Thousands in use on light delivery cars. Send coupon for booklet and prices.

Excellent Territory Open

We have a splendid proposition to offer to business men in every county where we have no agent. Mail the coupon for the facts.

The Dayton Rubber Mfg. Co.
Dept. 29 Dayton, Ohio

This Tells the Story

I have used a set of Dayton Airless Tires, getting 44,000 miles out of the front and 20,000 miles out of the rear tires, the difference in mileage being due to my overloading my Ford Touring Car by hauling three barrels of oil constantly.

I used the tires constantly, nearly three years, and Dayton Airless Tires make no difference in the wear and tear of a car. I find the engine and steering apparatus as good or better than the average car of like age.

And the satisfaction of knowing that when a person starts he can get somewhere without distress of both body and mind by punctures, blowouts and loss of time is a compensation in this age of progress for any difference in price. The fact is, in the long run, the cost of Dayton Airless is about half the pneumatic cost.

HAROLD T. SMITH,
Assistant Treasurer.
HUMBLE & GULF COAST OIL COMPANY

Mail this Coupon

The Dayton Rubber Mfg. Co.
Dept. 29, Dayton, Ohio

Please send booklet and prices on Dayton Airless Tires as follows:

.....Passenger Cars
.....Light Delivery Cars
.....Dealer's Proposition

Name _____

Address _____

GALLOWAY'S SPECIAL 30 DAY OFFER



ENGINES

Here is your chance. Buy one of the famous Galloway Farm Engines or Spreaders at a special low price. Get in on this 30-day offer. Save money. When old winter freezes, snows and blows, there are many jobs that a Galloway Engine will relieve you of and it works in any weather. Built for long and hard service. Gives 7 actual horsepower for the price of 6. Portable or stationary. Big bore, long stroke, heavy-weight, every part standardized and interchangeable. With a Galloway "frost proof" Engine this winter, you'll do your work in less time and with less effort than ever before.

SPREADERS

Note these low factory prices below—they cannot be matched anywhere. Fine quality spreaders never sold for such a low figure before and never will again.

With Whirlwind Distributor

The Galloway new whirlwind distributor absolutely pulverizes every bit of manure and scatters it six to seven feet, saving time and labor in spreading. Remember that Galloway has 11 other great features that enable the Galloway Spreader to spread more land with less effort—less horse and man power—than any other method known.



Factory Prices

$154.75 For the New No. 8

$147.25 For the New No. 5

$139.75 For the New No. 1A

Write Galloway Now

Don't let this 30-day low price opportunity slip by. Get your order in early. Have your engine for Winter work and your Spreader now for immediate or next Spring's work and save big money on both. Write today and get the full facts with complete descriptions of these bargain price, quality Implements. Near by shipping points save you on the freight. Write today!

WM. GALLOWAY, Pres.

Wm. Galloway Co.
397 Galloway Station
WATERLOO, IOWA

A Country Boy in the City

[CONTINUED FROM PAGE 8]

country "for the children's sake," while, if the truth were told, the older "children" are longing for the old scenes just as strongly as the younger ones. Even if they are "city successes," they have paid a price for it.

One of the departments maintained by the association for which I worked was a large teaming company, having 150 head of horses and employing about a hundred men. The manager heard the call of the open country, and I was appointed to take his place. It was one more step up the ladder. I didn't know much about the business, but I did know horses, could handle men, and was a good judge of hay and grain.

At the barn I got a view of "the city boy in the country" problem from still another angle. I found that when the city had got the best of a country boy one of the chief places he went to hang around was the teaming barn. There these country lads seemed to find a link that connected them with the old life.

I had been in the city a good many years by that time, and one day I got to thinking it over. The constant eating of restaurant food had put my digestion in bad shape, despite active exercise, which I always kept up. I felt that I had made quite a success, and yet, through all of my years there, there was the feeling that "I didn't belong." I never got so I felt as if I were really a part of the city.

I had bought a little land down on the Gulf Coast, and I hoped some day to "go back." My determination was suddenly strengthened when the examiner of an insurance company refused to pass me. That examination woke me up. My health had slipped. I'd never been any too husky, and recently I had felt that the strain of the city was wearing me down. My regular doctor, who had been a country doctor, finally tipped the scale.

We had been talking about a recent fishing trip of his, and how he had enjoyed every second of his stay in the open. He knew that I was getting worn out, and after talking about his trip he turned to the window and waved his hand at the smoke-covered buildings, the clanging street cars and hurrying crowds, and said:

"Is it all worth while? Is it worth the price?"

A short time later I was offered the chance to take charge of some farming operations near where my own land was located. The salary wouldn't amount to more than about one third of what I was getting in the city, but I'd be back in the open country.

One afternoon in early May I sat on a piling of the breakwater out on the lake shore, fighting out my problem. I looked off across the sparkling waters, across which the lake boats were plying.

Beyond those waters, on the other shores, were quiet villages and hamlets and farms of every description. People over there were living the real life. True, they had their problems and their troubles, but—

I looked back at the city—it's sky-line overhung with a heavy smoke, its tall forbidding buildings standing out like a challenge, I reviewed my life in the city—

I had seen big employers of labor ask for country-raised workers, because they were more reliable for one reason, and because they would work cheaper and under conditions that some city workers would not tolerate. I had seen youthful ambition and enthusiasm used by big employers to the very limit.

I had seen it all; I had lived in the midst of it—success, failure, loneliness, everything the city held I had seen and tasted.

I looked long at the challenging front of the big city. It still was challenging, and always would challenge, the youth of the rural districts.

Night fell upon the city and I still sat on my piling and listened to the wash of the waves, and thought and thought. I thought of other springs and summers I'd passed in the city—hot nights when the air seemed dead and the whole city seemed about to suffocate. I saw again the crowded parks, the streets, and the door steps crowded with people trying to get a breath of air. I saw again the derelicts and drifters on the park benches and in the cheap lodging houses and "flops" of the city. I saw the congested slum districts, with the streets crowded with half-clad, underfed children.

And in contrast I saw again the fresh green fields of the open country, the woods, the creeks, the lakes, and meadows. I felt the clean night air of the country. I felt the fresh evening dampness, and I saw

[CONTINUED ON PAGE 65]



Carbide Gas Lights 24-Hour Shifts —Cooks Your Dinner —Irons Your Clothes

THE same brilliant powerful white light that makes continuous construction work possible in subways, tunnels and mines

(such as the gigantic Catskill Water Supply System, the Panama Canal, and the N. Y. Subway)

is already lighting over 250,000 country homes, besides supplying gas for the cooking stoves and for the sad irons that take the sadness out of ironing day.

Wherever machinery breaks, Carbide Gas is welding the parts together—on railroads, in shipyards, factories and plants—big and little—all over the world.

The story of Carbide reads like a story out of the Arabian Nights—of miracles accomplished between sleeping and waking.

If you wish to read it, write for free booklet

UNION CARBIDE SALES COMPANY

30 East 42nd Street, New York City, N. Y. | People's Gas Bldg. Chicago, Ill. | Kohl Bldg. San Francisco, Cal.

Dept. 108 903



Dusty air? Have a Luden's

Luden's clear the nose and throat; give quick relief to coughs and colds. Many factory workers use Luden's the year 'round.

LUDEN'S MENTHOL COUGH DROPS
GIVE QUICK RELIEF

Ditch for Profits

Insure big crops every year. Don't let crops drown out. Drain with

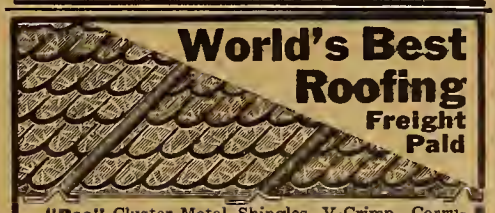


Martin FARM DITCHER GRADER TERRACER

All-steel, reversible, adjustable. Cuts or cleans ditch down to 4 ft. deep—any soil—does labor 100 men. Write for free drainage book.

Owensboro Ditcher & Grader Co.
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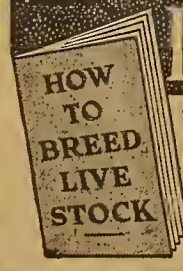
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Dr. Hess Poultry PAN-A-CE-A
Will Start Your Pullets and Moulted Hens to Laying

Dr. Hess Instant Louse Killer Kills Lice

Hats Off to Tilly

By R. E. Jones (California)

IF YOU should put all of the milk produced last year by Tillie Alcartra, the world's champion cow, in 10-gallon cans, and stack them in pyramid fashion, the peak would be as high as an eight-story building. If you took all the milk Tilly has produced in her lifetime, and stacked the cans, the topmost container would be 181 feet from the ground, with 62 cans at the base. Her product in the six lactation periods of her life would fill more than one and a half of the great 12,000-gallon oil cars that thunder by on the railroads.

"Tilly" is the frivolous name of one of California's most useful matrons. She is a registered Holstein cow owned by A. W. Morris & Sons of Yolo County, and recently, for the second time, broke the world's record for a year's production of milk. She has been officially tested for six consecutive years by the University of California College of Agriculture, and today is the most remarkable dairy cow



Tilly and some of the milk she has produced

history has known. She holds all the world's records for milk production from one year to six years, and all the butter records from three to six years.

During the last twelve months Tilly's yield was 33,424.8 pounds, or 16,712.4 quarts, of milk. She beat the best previous record by 2,178 pounds, and set up a mark which dairymen do not expect to see beaten for many years to come. At 13 cents a quart retail, Tilly's milk would have brought $1,172.61, which is considerably above the annual wage of the average man in the United States. Her milk actually sold at wholesale for $920, or $2.76 a hundred pounds. Had it been chosen to turn her product into butter, her year's yield would have been 1,323 pounds, or 661 rolls. In terms of butter, her lifetime production has been 6,142.11 pounds.

You'll be interested in the wonderful economy of this remarkable cow. For every dollar's worth of feed she consumed she returned $3.17 worth of milk. She ate during the year 5,872 pounds of concentrated feed, such as ground barley and oats, bran, soybean meal, cottonseed meal, and linseed meal, and 31,550 pounds of roughage feeds, such as field beets, dried beet pulp, silage, and alfalfa hay. She roamed in an alfalfa pasture at will during nine months of the year. Her favorite feed was of the salad variety—freshly pulled beets, of which she had 21,000 pounds in the year, as much as 80 pounds a day when milk flow was heaviest.

I have seen cows on test kept in carefully bedded stalls, screened against flies, and with a purring electric fan to keep them comfortable in warm weather. Tilly had no luxuries save the privilege of wandering where she wished in the pasture, or remaining in her stall. She was fond of the open, and spent many of the summer nights under the stars on a bed of cool, green alfalfa.

While Tilly is making a great name during her lifetime, her real value will be realized in the future of dairying, for she perpetuates her virile, heavy-producing blood through her three sons and three daughters, all of which are living. Shortly there will come another calf, and then the mother will freshen for still another 12-months' test, which may mean more shattered records.

Live-Stock Development Through Farm Bureau

TWENTY carloads of live stock, including Holsteins, Shorthorns, and Shropshire sheep, have been shipped into Gage County, Nebraska, by the local farm bureau.

As county agent, I acted as the representative of the farmers in making the purchases. This is the record made by the Gage County farmers since the farm bureau was organized in 1913. This system

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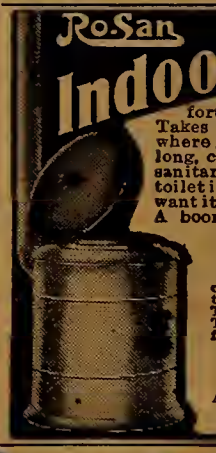


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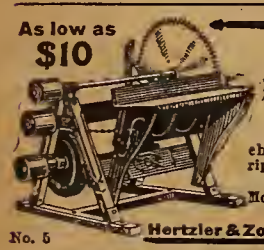
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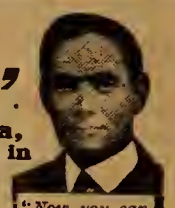
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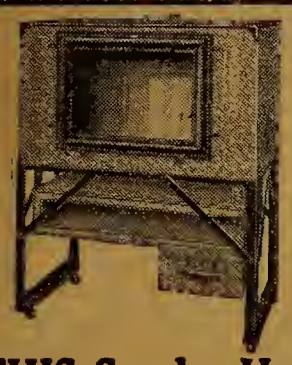
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You know the dangers of neglecting painful lameness, bruises and swellings. Put Sloan's Liniment on the job and let it relieve those poor dumb faithful beasts from suffering. Just apply a little *without rubbing*, for it *penetrates* and keeps the animals efficient.

For family use, too, Sloan's Liniment soon relieves *rheumatic twinges, lumbago, stiffness* and *soreness* of *joints* and *muscles*. A bottle around the house is a thoughtful provision for first aid emergency.

Six times as much in the large hottle as you get in the small size hottle. Bear in mind, Sloan's Liniment has heen the World's Standard Liniment for thirty-eight years. 35c., 70c., $1.40

Sloan's Liniment *Keep it handy*

has had a wholesome effect upon the live-stock industry of the county, and the number of pure-bred herds has increased in these last few years over 40 per cent.

This plan naturally works both ways, both in buying and selling. The Gage County Farm Bureau has conducted in the last two years, through its auxiliary organization, the Live-Stook Breeders' Association, a special advertising campaign offering its live stock in carload lots, and encouraging prospective buyers to pool their orders and send their representative to buy the stock. Three carloads of breeding stock have been sold recently by this method.

County Agent Beatty, of Clayton, New Mexico, carrying orders from his farmers for a carload of Holsteins, visited the Holstein herds of Gage County with me, and bought a carload of excellent cows, heifers, and bulls. Two other cars were sold the same way to representatives of breeders from Wichita Falls, Texas, and McCook, Nebraska. A half carload of Angus cows were also sold through County Agent Thomas, of Fillmore County, Nebraska, to farmers of his county.

This system of exchange between farm bureaus has developed very rapidly the last few years. Requests come through this office every few weeks. Many, of course, we are not able to fill because of lack of surplus stock.

A new community, in order to make advancement, will be benefited if it takes advantage of the opportunities offered by the breeders who have established herds, and by then using their breeding stock. The question arises how best to buy this stock and get the proper start.

We have our public sales. These offerings are one source for prospective purchasers. The other is the pooling of orders by farmers in one community, turning them over to a person well qualified to act as their agent to make the purchase for them. This latter method has many advantages. The person engaged to make the purchase can go to the place where the best selections can be made. Animals can be selected solely on their worth. Oftentimes better selections can be made from the entire herd than taking those that are offered in the sale ring. There are larger numbers of animals from which to make a selection. Then when a carload will be selected and shipped the expenses are naturally less.

The public sale, of course, is necessary. We believe a well-conducted sale creates a wholesome effect on the live-stock business. A sale carries with it the element of a show or exhibit. Anyone who likes good live stock, and attends a sale when the animals are well selected, cannot help but get an inspiration. It is certainly worth while.

The pooling of orders, however, and shipping in carefully selected stock, has its place in the development of better live stock in the community. It is a system of live-stock trading that should be developed.

We believe that the organization of farm bureaus with the county agents in all the agricultural counties will bring about this sort of trading in a large way, and with it the corresponding betterment and improvement of all our live stock. *L. Boyd Rist.*

Smothering Out Quack Grass On My Farm

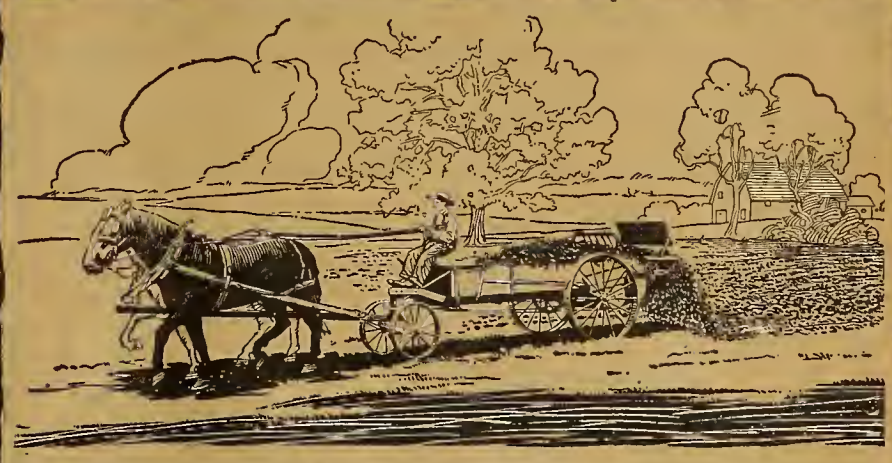
By F. C. Squires (New York)

IT SEEMS to me I have never seen the treatment for quack grass which I have been practicing for some time with gratifying results, mentioned in any farm paper. I do not use the spring-tooth, and have observed that the farmers who do use it have plenty of quack grass.

For several years I have been following the practice of always going the same way over the quack with wheel or disk harrow, smoothing harrow, or cultivator where there is quack. Go the same way in the row when cultivating every time. The idea is to keep crowding it under and covering it. If one goes the opposite way in the row alternately, it just puts the quack in good growing condition.

I prefer the disks to be dull, so as to not cut the roots when disking, because the more you cut the roots the more quack you have. Sometimes quack is hard to pull, and at other times it pulls easily. One should watch and take advantage of it when it is weak.

It's only common sense to assume that the farm that's growing richer and paying a profit has got an owner with brains behind it.



Now is the Time to Buy Your Spreader

A GOOD manure spreader, properly used, will undoubtedly earn its full cost and more on any average farm this year. Besides doing that, it gets you into the habit of fertilizing your land regularly and so building up a soil condition that makes your farm more valuable with each succeeding year.

Everybody expects prices of farm products to be high this year. The market will absorb everything you can raise and pay you well for it. Occasional top dressings of growing crops will increase yields this year, probably more than enough to pay for your spreader, and will also give you even greater assurance of bigger yields next year. Buy your manure spreader now and get busy.

For best results, get one of the light-draft

Corn King — Cloverleaf — 20th Century

spreaders, whichever of the three the dealer sells. All these machines spread beyond the wheel tracks, yet are so narrow they can be driven right into the barn for easy loading. There are three handy sizes, small, medium, and large. Each can be adjusted to do the heaviest spreading ever required, or for the lightest kind of top dressing. The spread is wide enough to dress three rows of corn at once.

You cannot expect land to grow bumper crops on an empty stomach. This year it will pay you well to feed your crops. Buy a Low Corn King, Cloverleaf, or 20th Century spreader now. At harvest time you can charge the full cost off your books and have a spreader that has cost you nothing and that will do good work for years to come. See the local dealer or write us for catalogues.

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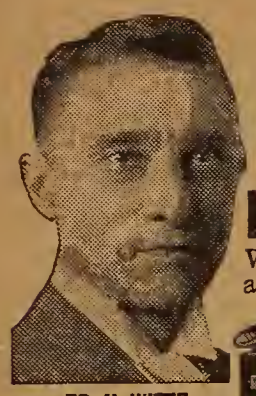
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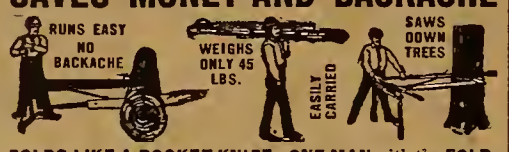
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Big Crops in Northwest Texas on the New Line of the Santa Fe

The Federal Railroad Administration has authorized the completion of the new Shattuck Branch of the Santa Fe Railroad to take care of this year's big crops—wheat, oats and sorghums. This will open for immediate settlement and development a large block of my land in a wheat and stock-farming section of Ochiltree and Hansford Counties in Northwest Texas near Oklahoma State line, where the first crop has in a number of cases paid for the land, and where cattle and hogs can be raised at a low cost. Land is of a prairie character ready for the plow. **No stone, stumps, no brush to be cleared,** at attractive prices on easy terms. Climate healthful, rain falls during growing season. Write for free illustrated folder, giving experience and results settlers have secured in short time on small capital. T. C. Spearman, 988 Railway Exchange, Chicago, Ill.

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Did You Know George Washington Owned $500,000 Worth of Farms?



The courthouse where Washington's will can be seen

IN THE little town of Fairfax Court House, about 15 miles west of Washington, the national capital, stands the ancient courthouse where the original wills of George and Martha Washington are kept in a glass case, which is placed in a large fire-proof and burglar-proof vault. These documents show how extensive were the landholdings of the Father of his Country, who was a mighty good farmer too.

George Washington's will, which was admitted to probate January 20, 1800, consists of 40 pages of his own handwriting. Martha Washington's will, dated March 20, 1802, consists of only a few pages, and has been in the burglar-proof vault only three years, as it was removed from the courthouse during the Civil War and only recently recovered. The will was stolen during the war, and came into the possession of J. Pierpont Morgan. The county of Fairfax could never afford to present the case before the courts in order to recover the will, and finally the Virginia legislature passed an act making the expenses a state charge. Morgan finally gave the will back to the courthouse.

George Washington was one of the largest landowners of Virginia. He inherited 12,500 acres of Virginia land from his half-brother, Lawrence Washington, about the year 1754; 5,500 acres, including Mount Vernon, were located in Fairfax County, and the rest was in other parts of the State.

In 1799, when he died, his landholdings were 56,475 acres, the majority of which were located in other parts of the country, and his estate was valued at over half a million dollars. In those days that was considered great wealth for an individual.

On his home plantation at Mount Vernon he had in cultivation many acres of wheat, oats, grass, and corn, while a considerable number of acres were given over to raising potatoes, beans, peas, buckwheat, barley, and many other farm products. His live stock consisted of several hundred horses, cows, oxen, sheep, steers, and a great many hogs.

According to documents now held in the old courthouse at Fairfax the value of the Washington estates, about 1798, was as follows:

Acres		*Value*
4,039	Loudoun & Fauquier counties	$41,540
9,744	the Ohio River	97,440
23,341	the Great Kanawha	200,000
2,236	Berkeley County	44,720
571	Frederick County	11,420
400	Gloucester County	3,600
240	Hampshire County	3,600
1,119	Charles & Montgomery counties, Md.	9,828
234	Great Meadows, Pa	1,404
1,000	New York State	6,000
3,051	Northwest Territory	15,251
5,000	Kentucky	10,000
50,975		$444,803
	Lots in Alexandria, Winchester, and Warm Springs	24,332
	Stocks and honds	25,212
	Personal (except slaves)	15,653
	Great Dismal Swamp interest	20,000
		$530,000

Also 5,500 acres in Fairfax County, including, River Farm, Mansion House Farm, Union Farm, Dogue Run Farm. This land estimated to be worth from $10 to $20 an acre.

The courthouse is open to visitors almost every day of the week, except Sundays and holidays, and there are many interesting things to look at besides these two famous wills.

WENDELL M. WHITING.

How Our Silo Has Paid for Itself

By Chas. Olive (Minnesota)

IT IS to me a great mystery that so many farmers are still without silos. Having been in use for a quarter of a century, they are certainly beyond the experimental stage. They have brought success to agriculturists in every State. Most farmers who have found their silos unprofitable have not used them rightly, or have made some serious mistake in their construction.

Before building our silo we had only 10 cows; yet, to provide ample forage for them, winter and summer, good years and bad, was sometimes a difficult job. Now we have 20 cows, and it is easier to provide feed for them than it was to provide for the other ten. Besides, our silage-fed cows are in better condition, look sleeker, and produce a higher grade of milk. For the last two years every cow has produced on the average 400 pounds of butter per year. This butter, we have ascertained, has cost us 10 cents a pound less to produce than butter coming from cows not fed silage.

Comparing figures with one of our neighbors who has no silo, we find that each of our cows cost us, per year, $13 less to feed than his. We are also able to produce beef $2 cheaper per 100 pounds than he can. Figuring at this rate, we came to the conclusion that our silo earned, last year, at least $265. Moreover, we saved much grain feed by giving the colts silage, and also the horses, when not working. Indeed, I believe that our silo has sav enough to build a new one each year the last four or five years.

Sometimes when the corn crop has b short we have made good silage from mil clover, oats, or rye. We have fed this w success even in winter, but mostly we f it during the latter part of summer, af the corn silage is fed out. In fall, aga we fill the silo with corn, and if this is enough we refill it later with cornsta taken from shocks in the field. The stal if soaked with water, can easily be cut, a make good silage.

We always try to have a supply of sil for summer. The cattle need a cool, suc lent feed during hot weather: and wha better than corn silage? Some summ also, the pastures dry up, and then sil comes in handy. Besides, high-priced p ture lands do not pay. Since we be feeding silage in summer, we have had o half as much pasture land as formerly, a our cows have milked as they never did fore. A piece of land used for raising lage crops will produce five or six time much feed as will a pasture of equal size

Every farmer having 10 cows or m needs a silo. Without one it is hard to c profitable dairy business. A good silo stand as long as any other building. built ours seven years ago, and it is stil good condition.



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My Colony-House Plan

By R. G. Kirby (Michigan)

I HAVE read the article "Things You Should Know Before You Try Poultry," by C. W. Hunt, and while I do not doubt Mr. Hunt's experiences I think he had more bad luck than was really necessary, and possibly painted the poultry situation a little too dark. Here are some ideas of my own about colony-house construction and management which you might find interesting:

Small colony houses can sometimes be made from the scraps left over after finishing other farm buildings. They should have strong frames, so they can stand the strain of moving. Small colony houses can be built on skids so that they can be moved around the farm by one horse. The large colony houses, such as 8x10 or 10x12 feet in size, cannot be moved by one horse. Some poultrymen build hubs on each side



A movable colony house

of a large colony house. Then wheels can be attached, and they can easily be pulled to a new location.

Our idea of the most suitable colony house is one 10 feet wide and 8 feet deep. Such a house can be built on skids, and easily drawn to any part of the farm with two horses. A house of that size is large enough for a stove brooder containing 200 chicks, or it will protect 100 pullets until they are ready to be placed in the laying house in the fall. An 8x10-foot house can be lowered from its blocks on a stone boat, and hauled to a new location.

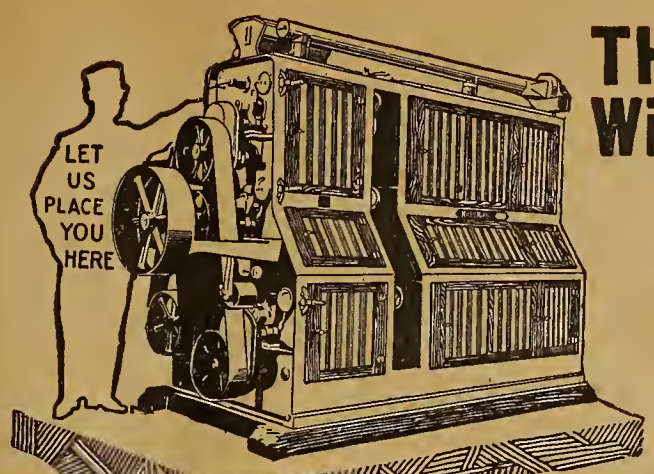
Colony houses are warm and free from drafts if they are covered with substantial roofing paper. However, we have some houses covered with black paper which are too warm. They draw the heat during the day, and become so warm that the birds can scarcely enter them. Houses covered with red paper do not become quite so warm.

We believe that the front door to each colony house should be nearly the height of the building. This saves bumping the head when entering to care for the birds. It allows plenty of sunshine to enter the house when the door is open. The doors should swing outward, so that none of the birds will be injured when the door is opened. It should always be hooked when open, so it will not swing in the wind and strike any of the poultry. Colony houses made of matched lumber and painted like the other farm buildings look very attractive in the field. When a colony house is covered with red roofing paper, the paper can be held in place securely by several strips of wood about one inch wide.

We find it pays to place a padlock on the door of each colony house, and to fasten it at sundown to prevent losses from thieves. Then, if the houses are locked and raised from the ground to keep pests from eating through the floor, the poultryman is fairly sure of keeping his flock if the other part of the management is all right. In very hot weather it is a good thing to have a small slit at the back of the house which can be opened to give a supply of fresh air. It should be near enough to the roof so that there will be no drafts on the birds.

The window of the colony house should be wide enough to take up most of the front of the house not occupied by the door, thus insuring plenty of light and air. The window need not extend nearer than two feet from the floor, and possibly about one foot from the roof. A curtain can be made of burlap attached to an old broom handle, but need only be used in times of hard rainstorms. It will not have to be lowered at night, as poultry furnish quite a little heat for a house, and they need a great deal of air. Plenty of fresh air is very important

[CONTINUED ON PAGE 63]



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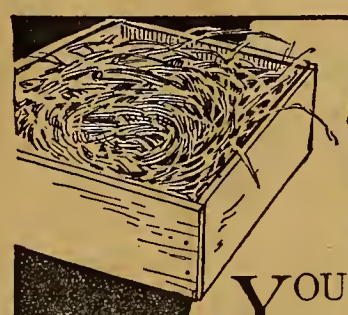
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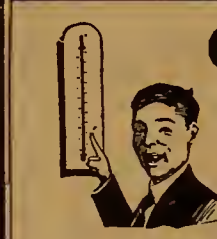
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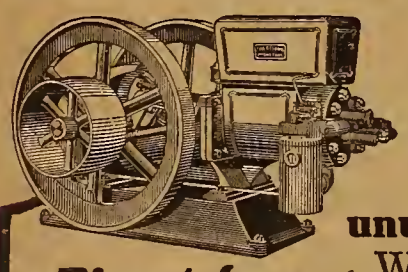
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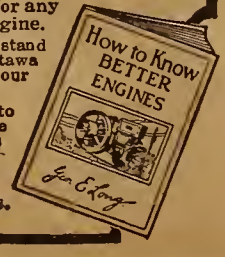
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How 8,500 Fruit Growers Are Cutting Out the Middleman

[CONTINUED FROM PAGE 13]

question of boxes that resulted in the organization of the Fruit Growers' Supply Company in the first place. In 1906 the lumber agency that controlled the output of box shook on the Pacific Coast took advantage of a temporary shortage in the lumber market to raise the price of shook so that a standard orange box, which was then costing the growers 13 cents, would cost them 21 cents. This was a terrific jolt, a raise of eight cents apiece on the 15,000,000 boxes per year the growers were then using.

The California Fruit Growers' Exchange sent agents into the lumber districts of California, Washington, and Oregon, and succeeded in finding enough independent mills to provide the major portion of the shook needed that season. But they had learned their lesson. The following year the growers organized the company. The first thing the newly organized corporation did was to go into the lumber business. To-day it owns 26,940 acres of timber land in northern California and southern Oregon. It owns the entire townsite of Hilt, on the main line of the Southern Pacific Railway, in Siskiyou County, California, where it owns and operates a sawmill with a daily capacity of 120,000 feet of lumber and a box factory of 90,000 feet daily output. It owns and operates a standard-gauge logging railway about 20 miles in length. In 1916 the mill cut more than 25,000,000 feet of lumber.

The company now has, on its own property and in timber under contract, enough lumber in sight to last them for seventeen years. In addition there is 75,000,000 feet on private holdings that w be available when the present supply exhausted, and besides that 350,000,(feet accessible in the forest reserve.

In 1917, the most recent figures ava able, the mill cut 23,440,000 feet of lum at a cost in pile of $11.02 per thousa feet.

By cutting their own lumber and ma ing a goodly share of their own boxes, t supply company is able to get a line manufacturing costs that enables it to some very close figuring with the m from which it contracts the remainder its boxes—just how close you can figu for yourselves, when you learn that the cost per box to the growers last year w 13.435 cents in contrast to 13 cents box twelve years ago. Only a raise of l than half a cent a box in twelve yea during which period the cost of living l doubled, and in some instances alm trebled.

The company keeps its members touch with the operations at Hilt by me of moving pictures, which are shown yea at the stockholders' meetings of the lo exchanges and at the picture hou throughout the Citrus Belt.

Another big saving is made by the sup company in the purchase of the tiss wraps for the fruit.

When the printing establishments th print the labels for the boxes began talk of raising prices, the supply company be to consider putting in its own print plant. It was not necessary. The print saw the light.

Will You Let This Happen to Your Cattle?

IT IS almost inconceivable that, with prices for live stock the highest in the history of the world, between 1,500,000 and 2,000,000 cattle and sheep die of exposure and starvation in the United States every winter; but such is the case. Blame for this inhuman practice does not fall on the progressive ranchman and farmer, but on the selfish individuals who prefer to take the chances of a 10 per cent or greater loss rather than feed during the winter months.

Thomas E. Wilson reports, after much study and investigation abroad, that in one of the best farming regions of Germany the number of cattle is not more than one to the square mile. The rest of continental Europe is in no better condition, and it will be necessary for them to import not only meat but also breeding animals in large numbers. The world needs every beast, and such wanton waste is not only poor business practice but also a gross crime against civilization.



Mother dead and calf starving on a western ranch

The losses are heaviest in the range States, Wyoming averaging with sheep 58 per 1,000, and 30 per 1,000 with cattle; Montana 47 per 1,000 with sheep, and 34 per 1,000 with cattle; Colorado 42 with sheep, and 27 with cattle; Arizona 40 with sheep, and 31 with cattle. Although the winters are just as severe in Maine, the losses there with cattle are only 2 per 1,000, and the average for all New England is less than 7 per 1,000.

This loss is not confined to animals that perish, however, but millions of pounds of meat are lost through the stunted growth and the great loss at time of birth, due to the impoverished condition of the mother.

"I regret," declares a government official, "that there are some sheepmen who will take the risk of losing a $10 ewe to save expenditure of 50 cents on hay. Even severe winter, losses are light where n make provision for winter feeding."

We do not believe that *you* are one of men who allow this great waste every ye but if you are, get your pad and pen and it won't take long to discover tha pays to feed. All available forage should made into hay, and perhaps a silo wo pay you another year. There are lots other crops that make good silage besi corn.

The American Red Star Animal Rel the organization behind this movem says: "This great wrong, this crime, m end. Men, investigators, education, li ature, and money can do much speedil lessen the evil. What is done now reduce the suffering and loss which otl wise will take place." A. S. W

Try This Roost Curtai

THE roost curtain is a detail in poul house equipment which is much n likely to be needed in the farm or b yard hen house than on the comme farm, provided both use the open-fi principle.

The poultry house built for ex use is pretty sure to have good dept 16 and 20 feet are very common on c mercial farms. In back yards and on fa shallow hen houses are the rule. roosting hens are consequently several nearer the open front, and where the front is of good size the hens may e require the protection of a roost curtai extreme weather.

The idea of the roost curtain is n coddle the hens. In most localities, vided the breed is a practical, comme one, the roost curtain will be used onl rare occasions. But, used rarely, the tain will pay for itself. Ordinary burl satisfactory, sewed together. Thus cost is very low.

The curtain should be attached to ceiling about two feet in front of the h and should hang slightly below the r level. In times of high winds it is espec valuable, acting as preventive ag colds and roup. In the drafty pou house the burlap roost curtain is alwa legitimate piece of equipment. The cu can be stretched over a frame and hi at the top, or placed on a roller. The la in some respects, is more convenient.

J. T.

Time and tide wait for no man, but and care applied to farm tasks pay man.



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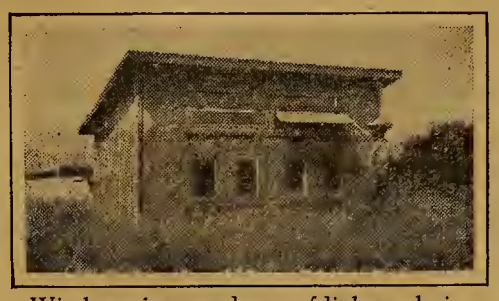
My Colony-House Plan

[CONTINUED FROM PAGE 61]

in developing the healthy colony-house stock, which will grow into vigorous layers.

It is best to cover the colony-house window with quarter-inch mesh wire, and not with the wide-mesh wire which permits sparrows to enter. This fine-mesh wire also helps to break the wind and keep out thieves. If sparrows can eat from the hoppers in colony houses and roost under the roof, they soon become a serious pest around the poultry buildings, and consume considerable of the scratch feed which is thrown out for the birds.

When colony houses are raised from the



Windows insure plenty of light and air

ground the wind can have a sweep under them, and there is danger that they may be turned over in a severe windstorm. This can be avoided by driving a strong two-by-four down at each corner of the house and spiking it securely to the framework of the house. As colony houses are part of the necessary investment of the poultryman, it pays to give them good care and make repairs as soon as needed. Often a few of the roofing-paper nails will come loose. Then a strong wind may catch the loose paper and tear off a large strip. Painting the roofs every few years will increase the life of the paper. Nothing is more insanitary for poultry than a house which leaks, as every rain will turn the floor into a dirty and unhealthful condition.

Make the floors of the colony house strong, and use enough braces underneath so that there will be no danger of breaking through while walking in the house, which may cause a broken leg or sprained ankle when the farm work is at its height.

A Bathtub for Hogs

By Orin Crooker (Illinois)

THE indulgence, in a sanitary way, of the hog's natural love for wallowing is productive of better hogs and larger profits. A cement bathtub installed in the hog lot is an efficient means to this end. Such a wallow is easily built at small cost. A dozen sacks of cement mixed with coarse sand and gravel in the proportion of one to four will construct a pool at least 6x12 feet in dimensions. The walls should project somewhat above the ground in order to keep foreign substances from finding their way into the wallow. Shallowness of the basin is to be aimed at, rather than depth. Three or four inches of water in the pool is sufficient. An outlet into an underground tile should be provided, and water should be piped from some near-by source.

The concrete hog bath indulges the animals, natural desire to wallow, and promotes a sense of creature comfort and contentment which makes for thriftier animals. By replenishing the water with reasonable frequency, greater cleanliness of the hogs is maintained, and there is less liability of disease. If a dip or some form of disinfectant is placed in the water once a week the hogs will keep themselves free from vermin. It is the experience of men who have installed the concrete wallow in their hog lots that it is to be counted as one of the things which go far toward successful hog-raising.

The Pennsylvania Dutch

[CONTINUED FROM PAGE 16]

profitable. If you find it irksome to look carefully after seeming trifles on your farm, think a minute about what those trifles mean to the pocketbook of the Dutchman and you may agree with me that "trifles" are an important part of the farming business.

With this article and the one you read last month you have a fair idea of the two main things that make the Pennsylvania Dutchman prosperous—reputation, and thrift.

But what of his family, his children? Do they enjoy life and have a good time? I will tell you about them in another article in the next issue.



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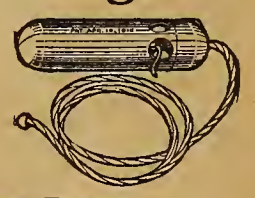
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No. 1½ for general use. Regularly $2.95; Sale price **$1.89** per doz. Weight 12 lbs.
No. 2 for Fox, Coon, etc. Regularly $4.15; Sale price **$2.88** per doz. Weight 15 lbs.
No. 3, Coyote, Wolf, etc. Regularly $5.50; Sale price **$4.18** per doz. Weight 23 lbs.
No. 4, Beaver, Otter, etc. Regularly $6.50; Sale price **$4.59** per doz. Weight 26 lbs.

Jump Traps

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No. 1 for Mink, etc. Regularly $2.80; Sale price **$1.85** per doz. Weight 9 lbs.
No. 1½ for Skunk, etc. Regularly $4.15; Sale price **$2.74** per doz. Weight 11 lbs.
No. 2 for Fox, etc. Regularly $6.15; Sale price **$3.84** per doz. Weight 15 lbs.
No. 3 for Beaver, etc. Regularly $8.20; Sale price **$4.85** per doz. Weight 23 lbs.
No. 4 for Wolf, etc. Regularly $9.65; Sale price **$6.15** per doz. Weight 28 lbs.

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Tips on Trapping

By Robert E. Hewes (Ohio)

NOTE: This is the first of a series of articles on trapping which will run through the winter. Mr. Hewes is a practical trapper and woodsman, and we believe you will find his articles interesting and helpful in snaring the wily fur bearers.

THERE are certain fundamental rules about trapping which most everybody knows. If one does not, any of the various guides that are free for the asking, or the hired man, can give the youthful beginner his first lessons. But after one masters the first rules there is always more to learn. I learn new things every year, and old trappers have told me that they never expect to know all about trapping. In these little talks I shall take it for granted that you are familiar with the old cut-and-dried methods, and want something different. I am going to tell you some of the things I have learned through experience, sticking to facts and leaving the theories to be proved.



"Brer Coon"

The first and important rule is to look well to your traps. You do not want a gun which hangs fire, likewise you do not want a trap which does not always work. The one time it fails to spring may be the very time an animal wearing a $10 coat of fur steps on it. Traps are usually hung in the woodshed during the summer, and are likely to collect rust and dirt and become unsure in action. The time spent in cleaning and examining them will pay well. Another thing I would like to mention here is the matter of killing-traps—that is, traps which kill animals as soon as caught. I have tried these, and unhesitatingly recommend them. They prevent animals escaping and do away with unnecessary suffering.

Outwitting the Skunk

Mr. Skunk with his unsavory reputation is probably the best known of our fur bearers. It is an exceptional farm which cannot boast of a skunk den or two. Civilization may drive the larger denizens of the wilds afar, but the skunk readily adapts himself to new conditions, and becomes domesticated to the extent that he is nothing loath to take up his abode under the barn floor or to burrow into a straw stack. While it is true that this animal is in some ways a friend of the farmer, by destroying harmful insects and mice, yet he has a black mark against him by virtue of his relish for chicken. He is a troublesome roost robber.

In closely settled neighborhoods Mr. Skunk will often advertise his presence by odoriferous means, and by depleted chicken yards, yet trappers will tramp the hills over and fail to find his den, especially if he has been much trapped. In this case you will very likely find him holding forth in some old building, under a stone pile, or around the roots of a tree.

When you find his den set your trap (No. 1½), digging a shallow trench in the ground so that the trap sets level with it, then fasten the chain to a stake and drive it down level with the ground. Too often trappers make the mistake of leaving a stake sticking up above the ground. Cover your trap with straw freely mixed with chicken feathers, and scatter a few grains of corn about. You will find this one of the best sets for skunks, and one that can be used anywhere. When you catch a skunk, do not muss up the surroundings too much. Skunks often den up ten or more in one hole, and if things are not too much dis-



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turbed, one set may prove very profitable.

Mice make good bait for skunks. If you can find where a skunk visits a chicken coop, set a trap alongside of the building and cover it with chicken feathers. Road culverts are a favorite prowling place for skunks, and a trap set at either end of one will likely produce results.

As anyone who has tried it knows, catching a skunk is only part of the job. Next, and some think most important, comes killing and skinning. The best way to kill a skunk is to shoot him in the center of the back of the neck with a .22-caliber rifle, using a short cartridge. If you have no gun, break his back with a long pole, which will have the same effect.

Lots of people, especially boys, who skin a skunk advertise the fact for days afterward. However, it is quite possible to do the job in such a manner that half an hour later you need not be a total outcast of society. The secret lies in first greasing the hands well, then use a sharp knife, and be careful to cut only skin deep when peeling the carcass. Unhappy experiences are nearly always the result of cutting too deep. Stand on the up wind side of your animal, and when you have finished wash your hands well with kerosene, and the scent will come off with the grease. If you get any scent on your clothes, fresh air and time are the best deodorizers.

"—And Son"

WE WERE at a pure-bred stock sale the other day, and after the sale was over we talked awhile with the man who was looking after the registration certificates and their transfer. Our conversation was suddenly interrupted. The purchaser of a fine Shorthorn cow and calf came dashing into the office. "Say," he demanded, "have you fixed up those papers yet?" No, he was informed, they hadn't been made out. They would be sent to him in a day or two. "Then that's all right," said he. "Take your time about that. But be sure to put it in 'and Son.' The boy's in partnership with me on this deal. He's keen after the good stuff. He knows as much about it as I do, and maybe more, and he's a half owner and gets half the profits. So you be sure and put the 'and Son' in the papers." On being definitely assured that the firm name would be properly inserted, the farmer grinned at us, and we grinned at him understandingly, and he went away happy.—*Farm Life.*

Does Potato Wart Occur in Your Section?

ONE of the most dangerous diseases of Irish potatoes has been discovered in the United States. Rough, spongy outgrowths of varying size are produced on the tubers, especially at the eyes. These warts are light brown at first, but become black and decayed with age. Sometimes all potatoes in affected hills are worthless. The disease does not attack the vines above ground. Report promptly all suspicious cases and send specimens to your county agent, or to the Plant-Disease Survey, U. S. Department of Agriculture, Washington, D. C.

A Country Boy in the City

[CONTINUED FROM PAGE 57]

once more the stars and the moon shining over a peaceful countryside—and no city haze of smoke obscured my sky.

I stood up and looked again. Darkness had fallen and the lights were coming out, but still I could hear the resistless rush and roar of the city, grinding on and on.

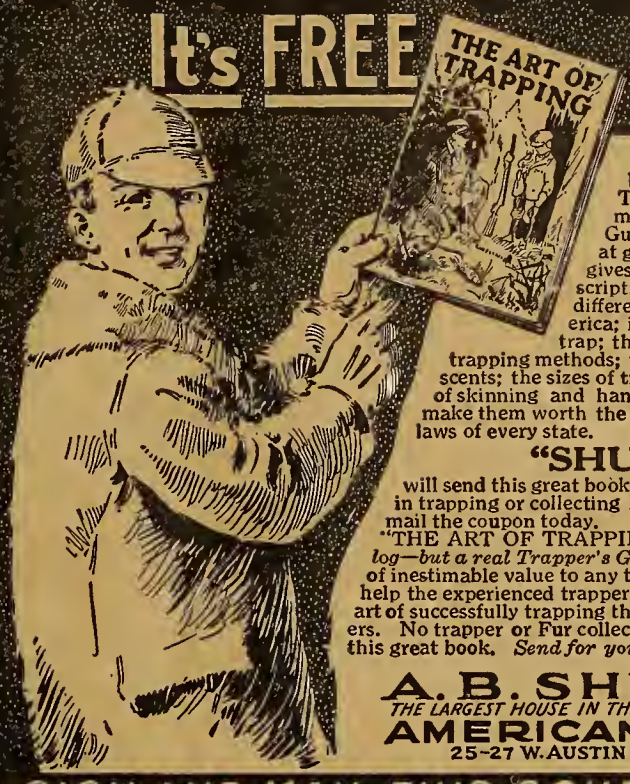
A few days later I awoke one morning and looked out of the car window. The train was speeding through the hills of Tennessee. Little farms and clearings nestled peacefully on the hillsides and in the valleys. Smoke from the cabin chimneys was lazily drifting upward.

That night I slept as I hadn't slept for years, the roar and the bang of the city seemed very far away. I got up early the next morning, and stepped out to the rear veranda. The sun was just coming up over the pine trees, the grass was fresh and gleaming in the early-morning dew. The cattle were coming up from the pasture for their morning meal. The chickens were setting up their early morning clamor; from a fence post across the road a quail sent out his cheery whistle, and from fields all around came answering calls—and also the cheerful song of the meadow larks.

I had left the city. And I have never gone back.

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Our Letters to Each Other

This is where we take a few lines every month to talk things over, so if you've got anything on your mind, let's hear from you

WE WILL start with the brickbats this month, and work up to the bouquets. Brickbat No. 1 is hurled at us by Mr. J. A. Allars of State College, Pennsylvania, and reads as follows:

"DEAR SIR: In your April number, under the heading, 'How I Started Bees on a Piece of Luck,' I notice several misleading statements. The following statement is made: 'Moths got into the honeycombs. They ate the honey and killed the worker bees by the score before I knew it. Then I found there is a patent hive that will keep moths out.'

"Any expert on beekeeping can tell you that moths do not eat honey, but only eat brood and combs with brood in them. They will eat old combs containing brood, and leave adjoining combs containing sealed honey intact. Also, the wax worms do not kill the worker bees directly. It is only when a worker becomes entangled in the webs produced by the worms that it loses its life. As to there being a patent hive that will keep worms out—that is a joke. Lots of such hives are sold to farmers who are ignorant of up-to-date beekeeping methods, by unscrupulous agents, but they are merely fakes.

"The only known way to combat the wax worm is to keep your colonies strong, and have Italian bees in preference to blacks. Empty hives or weak colonies allow the moth to slip in and deposit her eggs, but the normal colony never. For the enlightenment of the farmers who may be induced to invest in those so-called 'patent hives' I think it would be well for you people to make a little correction. The fellows who are selling these patent hives are just looking for the sort of recommendation your paper offers.

"At present I am a student here, but I have kept and made a study of bees since I was a small boy.

"For better authority I refer you to 'The A B C and X Y Z of Bee Culture,' by A. I. Root, or to Mr. E. R. Root, managing editor of 'Gleanings in Bee Culture,' Medina, Ohio, or to any standard work on bees.

"Hoping to have been of some service to you and to the farmer at large, I remain

"Yours sincerely,

"J. A. ALLARS."

There it is, J. A. A., just as you wrote it. And thank you for taking the trouble. Incidentally, you all may be interested to know that Mr. A. I. Root has written an article for FARM AND FIRESIDE, which will appear in an early issue, telling the story of how he happened to get into the bee business and some of the important things he has learned about it.

FARM AND FIRESIDE

The National Farm Magazine

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You are invited to ask questions of any or all of these men in their respective fields. State your problem clearly and fully, enclosing a stamped self-addressed envelope for reply. Address each editor care of Farm and Fireside, 381 Fourth Avenue, New York.

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Here's a Bouquet

Mrs. May E. Crist, writing from Delta, Colorado, and signing herself "An Old Subscriber," says, "We all enjoy FARM AND FIRESIDE. It has improved and is fine reading for us country people—so many helpful hints and paragraphs."

It always makes a fellow feel good to have others notice what he is trying to do, and say encouraging things about it. And because many of you have been so good as to mention the changes in FARM AND FIRESIDE I'm going to say just a few words about what we are trying to do with it:

First of all, we're trying not to "preach," nor to "advise," nor to tell farming folks what they "must" do. We get our preaching from preachers, who make a business of that sort of thing; our advice from our lawyers and our doctor, whom we pay for that purpose; and our "musts" from our own conscience. We consider that the farming folks are quite able and willing to do the same for themselves, without any help from us. What we *do* try to do is to make FARM AND FIRESIDE'S pages an experience exchange, through which the good things one farmer has learned can be passed on to all the others. We try to do this in a personal, interesting way. Once in a while we say something about a particular article in a note that goes with it, but that's merely our comment, and has nothing to do with the article directly. Ignore our opinion all you like. You've probably got just as good opinions of your own—maybe better.

In the second place, we are not hooked up to any "movement." We are not trying to "improve" anybody, nor to "uplift" anybody. We're not trying to get anybody to "join" anything. We have plenty to do in managing our own private and personal affairs without trying to manage those of anybody else. More than 600,000 subscribers, representing more than three million readers, pay their good money to take this magazine. We believe they want it to contain interesting, practical articles that they can get something out of for themselves; good fiction, good pictures, and plenty of clean, wholesome entertainment. We don't think they care two whoops about what we think they ought to do, and therefore we don't waste any space trying to tell them. Therefore, as long as we keep our senses, you can pretty well count on receiving in FARM AND FIRESIDE as near a 100 per cent magazine as we can give you, instead of a special plea for something we are interested in boosting and think you ought to be interested in too.

We try to run this magazine for farming folks, just like we'd run any other kind of magazine. That is, we run it first of all for human beings, always bearing in mind of course that the human beings we run it for happen to be in the business of farming. It may be unique for anybody to take the view that farmers are people; but we do take it, and we're going to stick to it, for it is true. It always has been true. Some folks just couldn't see it, that is the reason.

Excuse us for running on this way, but this is our hobby, and it was too good a chance to ride it to be passed idly by.



Tractor farming in Illinois

Thank You, Doctor!

Dr. C. F. Friend of Illinois sent us this picture of his nineteen-year-old-son riding the tractor with which he prepared 200 acres of Canada land for seeding. Young Mr. Friend just graduated from high school last year, and returned to his farm work during vacation.

This picture and its history is mighty interesting to us because of the train of thought it brings up. It seems to us to show how machinery is helping the farm business man to-day to triumph over the grinding and back-breaking labor that took much of the joy out of farming in years gone by.

It is almost as though the gods of iron and steel and gas came along and said:

"Here, you farm fellows, let us give you a lift. Take us, in the form of tractors, and trucks, and engines. You do the thinking and planning, and we'll do the heavies."

Now as to Milk Bottles

E. S. writes from the State of Washington to know how long the life of a milk bottle is; and inasmuch as it takes millions of bottles a day to distribute the milk that comes from America's farms we thought you might be interested to know the answer, so here it is:

Investigations made by the Department of Agriculture show that the average milk dealer buys 17,649 new milk bottles a month, and the large dealers buy more than 90,000 bottles a month, which are largely, though not entirely, replacement stock.

The Department made investigations in eighty-six cities. It was learned that the life of the average milk bottle is short. The specialist found that it makes only about seventeen trips before it is lost or broken. For every consumer who has a quart of milk delivered at the door each day, the dealer, in the course of a year, has to supply 20 new bottles.

In sixteen cities included in the investigations more than 8,000,000 sound milk bottles are collected annually from city dumps. Thirty-three of the eighty-six cities investigated had milk-bottle exchanges, or places where such bottles from all sources are sorted out and returned to the owner, provided he is a member of the exchange.

Only nineteen States have regulations governing the use of milk bottles, and of the eighty-six cities studied seventy-two reported the use by dealers of other dealers' bottles.

Here's the Answer, J. M. G.

"When I was overseas," writes J. M. G. of Iowa, "I noticed one day in England a young fellow—looked like a farmhand—with a wisp of straw in his hat, and I just wondered if he wore it for fun, or if it meant anything.

"We were on the march at the time, and I had no a chance to find out. you tell me?"

When we humans get out and around we learn a lot of things, don't J. M. G.? That trip to Europe w liberal education to a lot of the boys it's a pity more of us can't get aro bit. Most of us can, even if it's o little bit, and it would certainly be w our while to do it.

To answer your question, the wis straw *did* mean something.

In Great Britain and other par Europe a straw used in different means a lot of things among farming

In parts of England and Scotland carrying a straw in his hat is a plo or stable-boy in search of a place. for sale, in other rural districts, ar with a bundle of straw. Farmers pole on the road near the house, and its top with the homely symbol.

A horse's tail well plaited with s with the straw ends turned up, marks as for sale, but garnished more ro with straw wisps marks him as a ki Straw tied to the stall also indica kicking horse, and, in similar fashi bundle of straw on a gate post at a cut may give warning of an unrul within. Some farmers give further by fastening a bundle of straw o animal's horns.

In the country, in winter and the foxhunter always watches for when he comes upon it tied on t tall red pole he must look out for h wire; when hedges are strewn with s he must rein up to keep out of new wheat or clover fields. During the sho season on the Yorkshire moors tall s are placed along the pathways, and with straw. They bid the peasantr ware of the stray shots of the sp gentry.

Miners, extending the old-country tom underground, warn comrades of gerous parts of the working by mea straw thrown about the flooring.

In Germany workmen repairing roofs of houses hang a bundle of s from the top window as a danger sig passers-by, while bricklayers in N and Denmark tie similar bundles t top of the scaffold pole to signify tha chimney pots are set and their wo finished.

In the south of England a bund straw left in a field is a sign tha gleaners are not yet allowed to gath corn left by the reapers. When wh being sown, a stick crowned with is put up at each end of the field in to guide the sower and prevent his twice over the same ground.

Secured to the roof of a farmhou many parts of Ireland, it is an invitati passers-by to enter and drink the heal the bride and bridegroom, who are wi

In the west of England, neighbors their disgust of wife beaters by tying to the door handles of the houses in such cruel husbands live.

Despite the invention of knitting chines some elderly women in the no Ireland still carry wisps of straw into their belts. These form sheat their knitting needles, and are a sign to all and sundry who may cha pass by that their wearer is willi make knitted goods to order.

We Ask a Favor

Right here we would like to take lines to ask that when you write to be sure to put your name and addr the letter. We get a lot of questi can't answer because there's no na the letter. One old subscriber in Pet Michigan, for instance, wants to Thomas A. Edison's address. It Orange, New Jersey. We hope you this. But we can help you a lot if we have your name and address. I don't want it published, just tell us s we will see that no one finds it out. you know how it is—if you don't kno to answer it is pretty hard to answer

So long for this time.

George Martin

WASHINGTON, D. C.

FARM & FIRESIDE

The National Farm Magazine

DECEMBER 1919 5¢ A COPY

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OFFICE OF INFORMATION.



High Prices! Whose Fault?

See page 5

La Crosse TRACTOR

Announcing a New Low Price

OWING to our immense buying facilities and our standardized production we are pleased to announce that within a few days La Crosse Model G 12-24 horsepower Tractor will be sold at a reduction in price. The new price which will be announced definitely within a short time, will mean a reduction of between 15% and 30% from the former price of $1250. Figure out what this saving will mean to you.

The size, buying power, large production and standardized manufacture of the La Crosse Tractor Company are well known. In this unprecedented reduction in price we are showing you a practical proof of the value of dealing with a national organization.

The Same Tractor in Every Detail

The La Crosse Tractor which you will be able to get from your dealer at the new price is exactly the same tractor which was formerly sold at $1250. Not a detail is different. It is the same value today as it was a year ago, but our manufacturing facilities and sales policy enable us to sell it at a lower price.

12-24 H. P. 2000 Lbs. Drawbar Pull

At its new price the La Crosse Model G offers more horsepower for the money than any other tractor on the market. It is rated 12-24 horsepower—full 2000 pounds guaranteed drawbar pull.

This is the perfect kerosene burning tractor. With its own special twin-cylinder horizontal motor it holds many records for low fuel cost and dependable operation.

When desired, it is equipped with the Line Drive Attachment so you can drive it with reins like horses. It is self-guiding in the furrow and turns short in its tracks to right or left with equal ease. It has the fewest number of parts and every part is very accessible. There are thousands of these tractors being used successfully under many different conditions. Wait for further announcement.

New La Crosse Model M

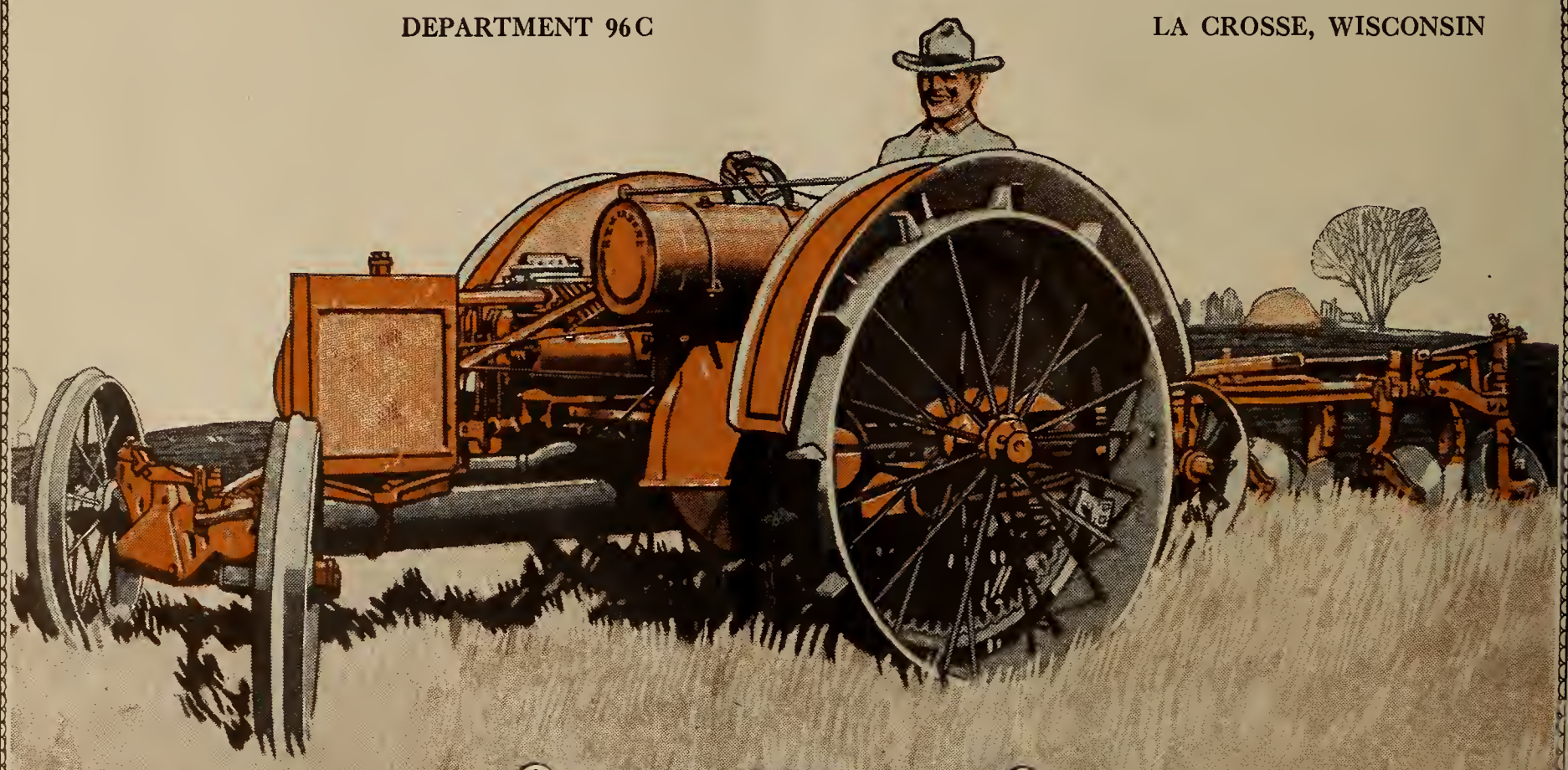
We are just announcing the new La Crosse Model M Tractor with 7-12 horsepower which you can operate with lines same as horses could be driven; used in connection with horse-drawn implements and does cultivating and all light field work as well as belt work. Better investigate.

See Your Dealer Immediately

See your dealer immediately and ascertain the new price on the La Crosse Model G Tractor. Get full specifications of the new Model M or write us direct.

LA CROSS TRACTOR COMPANY

DEPARTMENT 96C **LA CROSSE, WISCONSIN**



A La Crosse Tractor Means a Happy Farmer

How the Experience of Years Saves Money in This Post-War Maxwell

THE run of 300,000 Maxwells to date saves you many a worth while dollar in the new Post-War Maxwell. Those 300,000 saved in many ways.

More miles per gallon
More miles on tires

1. They taught "short-cuts" in manufacturing.

2. They eliminated all experimental work—you don't have to pay for a single engineering mistake.

3. They developed quantity production which has reduced "overhead."

4. They enabled quantity purchases; and better materials are bought at lower costs.

5. They taught how to build an almost trouble-proof car; you seldom take a Post-War Maxwell to a repair shop.

6. They taught how to get the most mileage out of a gallon of gasoline, a pint of oil and a set of tires.

7. They taught how to build a car that the less skilled driver would find simple to operate and take care of.

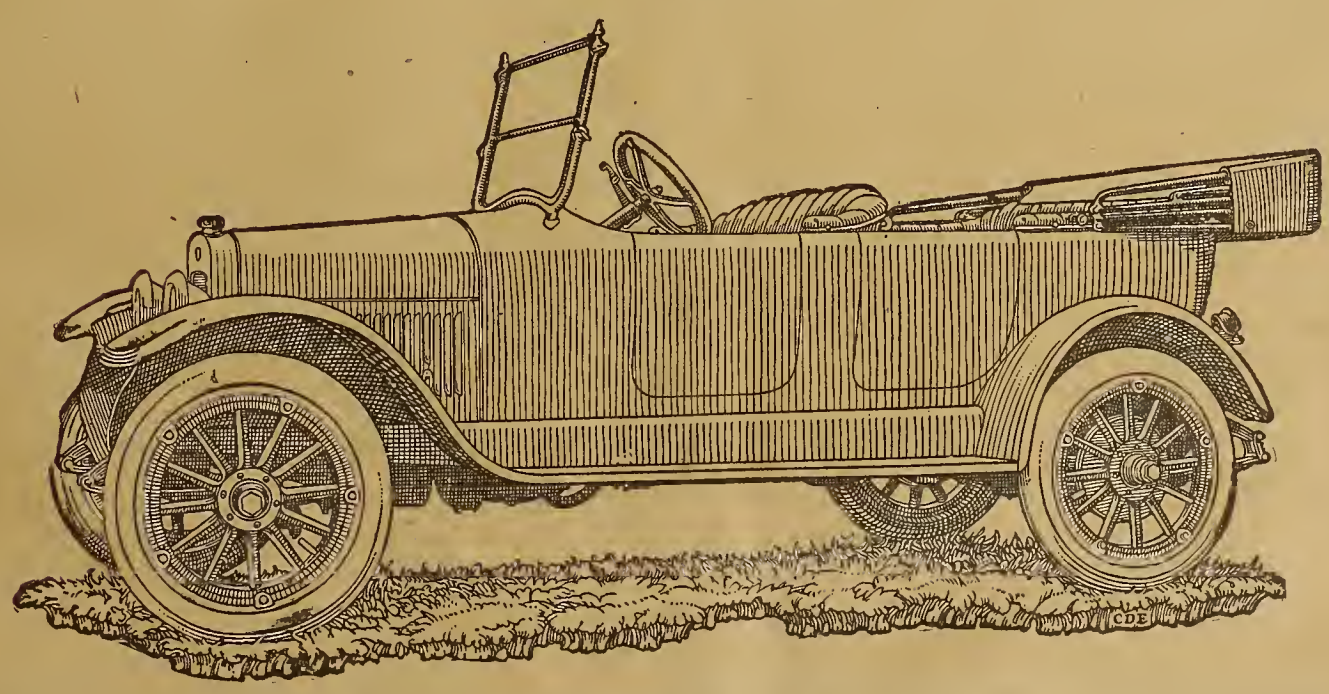
8. They taught that it was better to build more and take less profit per car rather than build less and take more profit per car.

9. They taught how to put more and more value in the car without increasing its cost.

This Post-War Maxwell is next year's car. It contains features developed during the war, many of which will find their way into other cars in the summer of 1920.

Price $985 f. o. b. Detroit

MAXWELL MOTOR COMPANY, Inc.
DETROIT, MICHIGAN







Warm shod—dry shod clean shod

The new "U. S." Walrus means all three

HERE at last is the overshoe that combines all the qualities you've always wanted! Look it over—it's the new U. S. Walrus.

It's an *all-rubber overshoe* that's absolutely waterproof. It's got a warm, snug-fitting fleece lining. It's convenient because you slip it right over your leather shoes—then push it off with your toe when you're through.

Best of all, the U. S. Walrus can be instantly *cleaned*. You can work for hours in the stickiest barnyard mire; then a pail of water or a rinse at the pump washes the U. S. Walrus clean—removes every trace of mud from its smooth rubber surface.

The comfort and convenience of the U. S. Walrus are backed up by real strength. A staff of experts have designed it—have made it an overshoe that is *built to last*. At every single point where the wear is hardest, the U. S. Walrus is heavily reinforced.

Your feet will *always* be warm—dry—clean shod with the U. S. Walrus. In every way, it's the farmers' ideal overshoe.

Ask your dealer today to show you the new U. S. Walrus. After you've worn a pair for a day or so, you'll realize why they're fast becoming so popular with farmers everywhere.

Other "U. S." models—all built for the hardest wear

Whether you prefer a boot for the wet season, a bootee, or rubber for general use, or a cloth-top arctic—you can find in U. S. Rubber footwear exactly what you need. Tough, heavy soles—special reinforcements at all points of strain—and *always* the highest quality rubber—these points are winning U. S. Rubber footwear thousands of new friends every year.

Look for the U. S. Seal—it means solid wear and long service for your money.



U. S. Arctics—Made of snug-tight cashmerette, warm and comfortable. Reinforced where the wear is hardest. In one, two, four, and six buckles, all weights and sizes.



U. S. Felt Boots—Made of heavy, finest quality felt, all sizes. For wear with one- and two-buckle U. S. Perfectians.

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United States Rubber Company

Volume 43
Number 12

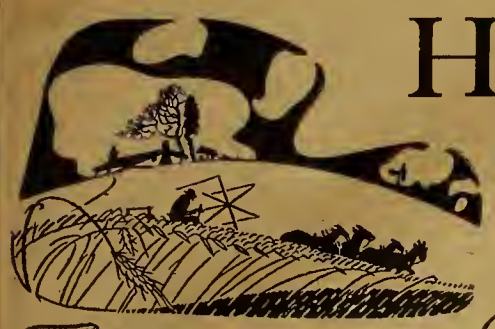
FARM & FIRESIDE

The National Farm Magazine

December
1919

High Prices—Whose Fault?

By W. S. Nelson
Missouri Farmer and Congressman from the Eighth Missouri District
Decoration by W. D. Stevens





"TAG, you're it!" seems to be the national game these days when everybody is engaged in a search for the individual, firm, or corporation, singular or plural, responsible for the high cost of living.

Should one man of the many accused boldly step forth and brazenly declare, "I am the culprit," he might put an end to a subject which as a generator of conversation has the weather backed entirely off the boards.

Even the farmer comes in for his share of the accusations. But is he to blame?

A few days ago I heard a representative of a big bean producers' association testify before a joint session of the Senate and House of Representatives Committee on Agriculture here in Washington, and when he had finished I thought of another childhood game, supposed to be played with a button but in which a bean was sometimes used, and I was constrained to say, "Bean, bean, who's got the bean?"

Complaint was made that at present prices bean growers are not getting the cost of production. Asked as to the price the growers in California have been getting for beans, the reply was that up until this fall it had been about 6½ cents a pound, and that on this basis beans of such variety and quality should be retailing in Washington at not more than a "bit"—12½ cents—a pound.

It was stated, however, that on this day the price was 15 cents. We are informed that it had previously been from 18 to 22 cents. But some beans are selling very much higher, according to testimony brought out at the hearing to which we refer. The difference is that these beans are cooked and served in pots containing about a quarter of a pound each.

In a moderate-priced Washington restaurant, it was stated, such a pot of beans costs 20 cents, or at the rate of 80 cents a pound. At a fashionable hotel in the national capital the same quantity of beans, it was shown, when served with music, to people up in the purple, and on fine linen—if we may express the thought of the man who knew—cost 60 cents for a quarter-pound pot, or at the rate of $2.40 a pound.

It would seem, then, that it makes some difference where we buy our beans. But it does not appear that it makes a great deal of difference as to the bank account of the grower, except as high prices demanded of the bean eater may decrease the demand for the product.

At this same meeting held in the Senate Office Building here in the national capital, J. R. Howard, representing the Iowa Association of Farm Bureaus, told of conditions out in the Corn Belt country. He told of how not only the heads of families but in many instances every member of the family had worked to the breaking point, and that now many were determined to quit.

"Domestic help," said Mr. Howard, "is an utter impossibility on the farm, and even in the fields it is almost out of the question to get help at any price."

I knew that every word that the speaker uttered was true, for less than a week before I had returned from my own home in Missouri, and while there had talked with many as to the labor situation. My fellow farmers there told of how they were paying $5 a day to boys to drive wagons at threshing time, the farmer supplying wagon and team and boarding his help. Hands at harvest time demanded from 50 to 80 cents an hour, and too often they were not to be had at any price.

Under these conditions, and with the uncertainty as to price for wheat next year, have we cause to doubt Mr. Miller's statement when he says that the outlook is for a wheat acreage at least 25 per cent less for the 1920 crop, and which is to be seeded this fall?

Frequent complaint is heard as to the guaranteed price of wheat, $2.26 per bushel Chicago basic price, but nearer $2 on the farm where grown. This complaint has, in the main, come from city folk who do not understand the situation. Many of them have been told, and actually believe, that to use the billion-dollar wheat price guarantee fund to lower the price of wheat to $1 or $1.25 would result in a five-cent loaf instead of a ten-cent loaf. The same course of reasoning would lead us to the belief that free wheat would result in free bread. The facts are that as compared with the prices of other products wheat is to-day the cheapest thing on the market.

The secretary of the Missouri State Board of Agriculture said to me:

"The average citizen is eating six bushels of wheat per year. If milled at 75 per cent, six bushels make 270 pounds of flour. At present the average farm price of wheat is $2. The city consumer is eating $12 worth of wheat per year—less than four cents per day, or only a fraction over one cent a meal. A pair of first-class shoes now sells for as much as a farmer gets for one person's supply of wheat for a whole year.

"Made into 75 per cent flour," continued the Missouri farm secretary as I talked with him, "a bushel of wheat (45 pounds of flour), retails at the rate of $6.75 per hundred, or $3.04. Made into 59 loaves of 10-cent bread, a bushel of wheat retails as bread for $5.09. Made into breakfast food, 206 packages weighing four ounces each, at 15 cents each, a bushel of wheat (less 14 per cent for moisture, or 51.6 pounds net) retails at the grocery store at $30.90. Wheat breakfast food served at 20 cents per individual dish, less five cents for milk, sells at a first-class hotel or restaurant to-day at $216.30. The farmer receives $2 a bushel."

Nor did the secretary of the Missouri Board of Agriculture mean to be facetious. He was merely stating the facts. As with beans so with wheat, it makes a difference in cost as to how and in what form we would have it served.

Director Barnes of the United States Grain Corporation very wisely decided not to lower the price of wheat this fall. Had he done so the relief, if any, to the ultimate consumer would have been infinitesimal, while the taxpayers would have been called upon to pay the additional billion dollars, or so much of it as would have been necessary to cover the loss.

I have said that the consumers are the principal complainants as to the government guaranteed price on wheat. Some producers are also complaining. These men hold that but for the guaranteed price, which, it is alleged, is being treated as a maximum price when it was designed to be a minimum, wheat would now be selling considerably higher. In this opinion I share.

I also know from carefully kept records on my own farm and from the figures of farm bureaus that under conditions which have prevailed this year, and with the average yield, the cost of producing wheat has been from $1.65 to $1.90 per bushel on well-managed farms. Not a very big profit, considering the work and worry.

That the cost of living is high everybody knows, and that it must, and in the very nature of things should, continue so for some time, most men who have made a careful study of conditions are convinced.

I do not by this statement mean to say that all prices should remain as at present. Heaven forbid! Profiteering should be stopped. With this thought in mind, I, with other members of Congress, voted to amend the Lever Food Law Control Act so as to extend its provisions to include clothing, containers of food, feed or fertilizers, fuel, oil, and implements used in the production of necessities, and to provide for a $5,000 fine or two years' imprisonment for profiteers. Personally, I prefer prison sentences. Fines are merely passed on to the people.

But if none were engaged in profiteering, there would still be high prices. For five years much of the world was engaged in the destruction of property—not money. The money we still have, and the United States has more, far more, than ever before. Men were taken out of productive pursuits, and of those who did till the soil or feed stock much of the fruits of their labor was diverted to war purposes.

If the law of supply and demand still works, we may expect high prices to continue until there is produced an amount sufficient to meet the present shortage, or until we learn to do on less. This need not be thought of as economics. It is just plain old-fashioned common sense. The soldier did not eat money, he did not wear money, war did not destroy money. As a result there is an abundance of money in the world, and especially in the United States, to-day. We are on an inflated currency basis. There is nothing cheap except the dollar.

Not so many years ago, during a period of low prices, men were frequently heard to say that it was of no use to grow grain or to feed stock, as such produce would not bring the cost of production. Now we hear men complain that there is but little inducement to work for what seems to be large salaries, as the money thus earned "will not buy anything." Here we have the two extremes.

In considering the question of the high cost of living it should be borne in mind that this condition is not confined to America. Yesterday I talked with a friend who had just returned after spending six months in a study of agricultural conditions in Europe. He told me that prices are higher there than here, and that in most of the countries he visited unrestrained spending was the rule. So the orgy of extravagance is not confined to America.

Just here I am led to say that we are to-day suffering from too much extravagant spending and too much extravagant speaking. Debt and distrust follow these as follows night the day. It is not to be denied that many are now engaged in a bitter fight to keep the wolf from the door. On the other hand, there are more, I believe, who could, if they would, be paying off debts of long standing, or who could be laying by a little. There is one place, and only one, where a dollar will go as far as it once did. That place is in the payment of a debt.

Take, for instance, the farmer who ten years ago bought an additional "forty," agreeing to pay $50 an acre. At that time five 200-pound hogs would have been required to pay for one acre. To-day one big porker would almost cancel the indebtedness on the same amount of land But lest someone refer to this as proof of inordinate gain on the part of the farmer, let me say that the cost of producing a hog ready for market is several times greater now than then. *And it is in the purchasing power of the profit rather than the gross price of the product we mainly are interested.*

Scarcity of help and consequent necessity of working together has taught us farmers much of co-operation. To-day there are many successful selling associations, and we may expect to see more. Farmers are very properly combining, not to raise prices, but better to market their product. The city consumers might well take a hint and join together in co-operative buying. The trouble is, though, that in most instances, while the farmer knows his neighbors for miles around, the man in the big city may not know his next-door neighbor.

Some time ago I took dinner with a friend whose home is in one of the large apartment buildings in upper [CONTINUED ON PAGE 24]

Well, Then, Who Gets the Money?

THE 1918-19 annual report of the California Fruit Growers' Exchange has just come to my desk. In it I find this statement:

"The Exchange this season shipped 33,082 carloads of the 45,692 carloads of citrus fruit shipped by the entire industry. There has been returned to California for the crop $75,600,000, with a delivered value to the wholesale markets of $100,000,000, for which the retailer collected from the consumer $160,000,000."

In other words, the original price paid the farmers for that fruit was more than doubled before it reached the consumer. The consumer paid the retailer a *margin* almost equal to the original price paid by the wholesaler to the farmer.

These representative figures show pretty clearly that it is to their extravagant retail marketing system that the consumer should look long and thoughtfully in seeking a solution of the high cost of living. In this connection, note the last paragraph of Mr. Nelson's article.

THE EDITOR.

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Mistakes We Older Folks Make When We Get Ready to Retire

By a Kansas farmer who did it

I AM one of that numerous class of citizens who make up a good share of the population and fringes of our American towns and villages—"a retired farmer."

A friend of mine, a farmer in the Middle West, who is past fifty and thinking of easing up a bit himself, asked me the other day what I considered the best way to quit; and, knowing that the same question is in the minds of a lot of you fathers and mothers whose children take FARM AND FIRESIDE, I am going to tell you what I told him. I hope it may be of some benefit to you in finding your answer:

The great mistake most of us make in quitting, I think, is that we interpret "taking it easy" to mean doing absolutely nothing. That error kills hundreds of retired farmers in this country, right along, ten to twenty years before their time.

I wouldn't presume to tell any farmer how to quit, because it is a problem for the individual to solve himself, but I *will* say that, however you quit, you ought to provide yourself with some work that will keep your mind and your muscles busy *every day*. Not busy to the point of wearing you out, but just to the point of keeping your mental and physical machinery well oiled and in good running order. Only by doing this will you enjoy your old age.

One farmer I know was forced to quit on account of bad health. He had money enough to take him through a natural lifetime, and he was of the type described—nervous and discontented if he was not occupied. He moved to a little town near-by, and saw what was in store for him. He did not want to go into business, as he could not be worried with business details, yet he must "do time." He had traded at a certain general store for many years.

A few days after he had started living in town he went to the proprietor and said he had a proposition to make. In brief, it was an offer to come into the store and clerk, but no salary was to be paid him. He was to work steadily, but of course free to leave when pleasure or business demanded. He was accepted. That was twelve years ago, and since then the store has changed hands three times, but he is still working on the original terms that he proposed. He is a man of seventy-five to-day, but stronger than he was the day he left the farm. He is at the store every day, the first man there, and sweeps out. He keeps regular hours, and says that he is a permanent fixture, the same as the showcases; and he jokingly remarks that whenever the store is sold in the future, as it has been in the past, he goes with it. That man knows how to retire.

It is a big problem. The city businesses are many-men businesses. There are partnerships and corporations, and where a business is owned individually there is usually a taking in of new blood to keep up the stiff pace that city competition requires.

Take for instance the lawyer: Here is a business that one man can successfully operate himself. But when the lawyer sees that he is being handicapped by years, or even before the actual handicap occurs, if he is prudent, he will take in a junior partner, and while the younger man furnishes the vigor that comes with younger years, the older man furnishes counsel that comes with age. Where both men are congenial, the combination is a happy one, and usually a successful one.

But the farmer almost always is in the fight alone. Not often is there a partnership; almost never a corporation, for in many States there is a state law prohibiting a corporation from operating farm lands. The intent is of course to keep the land from being held in large tracts by outside capital.

Another farmer I knew was facing the same problem. He had made plenty of money, help was scarce, and he could not rely on keeping men hired to do the work under his supervision. He built a new house on the place for himself, moved out of the old one, and turned it over to the younger folks. He did not sell off his stock, but is letting the young man use them and pay for a specified part for the horses and mules out of the money he makes off the farm. He is edging out and letting the young man edge in.

That is one city trick that it might be worth while for more farmers to learn.

Still another instance of the same thing is the case of a farmer who was pre-eminently qualified to take it easy in town. He had considerable lands and money in the bank. He had two boys, one married, and he gave them all they could raise off the land if they would pay the taxes, keep the buildings in repair, and furnish him and the family at home with provisions raised on the farm. In this particular instance the retiring farmer has shown no ill effects in health, and will probably not, although it is the exception rather than the rule.

Needless to say, the sons are getting a fine start on the proposition offered, and he has a younger son still in college whom he proposes to give the same opportunity. He says that the oldest one, who has been farming on this basis for ten years, has had a good chance to get ahead, and it is no more than right that he should step aside and give the younger brother a chance. The second brother by that time will be in a position to plan the work and have good business judgment to help the boy now in college get started in right. While it has worked wonderfully well in this case, in many others, where other children in the family are inclined to resent parental advantages offered to certain ones, it would breed trouble, for there are three boys who are in the city who have received practically nothing in the way of help. The father says that they could have had the same opportunity if they had chosen to farm, but they chose other than the "best business in the world," and they must abide by their decision.

I knew a pioneer who had broken sod in three States, before they were admitted to the Union, who found himself unable to meet the physical demands of the farm at sixty-five, and, his wife having died several years before, he was facing the end of life alone, unless you could count his children, some of whom were grandparents. By that last statement no disrespect is meant toward the children, for they held him in high paternal regard; but they were engrossed in their own financial and family problems.

For a while this man kept house with an unmarried daughter. He was weary of work, tired out in the hard fight he had made against the elements to keep his family together, and, unfortunately, he had not saved a great deal of money. He had a small farm and perhaps $1,000 in cash. He moved to a little town and qui work square off. Of a phlegmatic tempera ment, it did not seem to bother him a first. The daughter married. The chil dren, who were really very fond of him asked him to live with them. He decide that he would, and had eight places wher he was welcome at all times. In a fe years his heart, used to the strain of pioneer, began to go bad. But he resolve to stick it out. He refused to take even normal amount of exercise, and the las few years of his life were years of physica deterioration that competent doctors sai would not have occurred had he kept hi muscles hard and his mind alert.

If there is a son or a son-in-law in th family, that is a logical solution, provide that the father and son are both agreed In many instances there are obstacles i the way, and other arrangements must b made.

It's the old, old story of having a bea by the tail and can't let go. When farmer has worked and paid for his plac has made money enough to enjoy the com forts and luxuries of life, he finds turnin it over to someone else a hard job. If could disregard the sentiment, it woul still be hard. I still face two major qu tions:

What shall I do with the farm?

And what shall I do with myself?

The farm can be rented out; but wh of me, accustomed to an active life, carin little for the entertainments that town have to offer, and nothing for that of th city?

It often works out something like th experience of a man in one of the Wester States. He had paid for a good place Part of the family was grown and had mad places for themselves on other farms or towns. Two younger children had reache the high-school age. Family consultation were held, and it was decided to make sale, dispose of the personal property, ge a good renter on the place, and move t the county seat, where there was a goo high school.

Let us disregard the trouble he had i finding a suitable renter. He made all th arrangements, and made the move. Th house was not so good as the one on th farm, for, being conservative by lifelon application to that trait, he figured tha the house was comfortable, even if it di not look very well and was not located i that part of the town where people of h own financial and social rank lived. Ther was a little garden, but no barn and n stock to tend.

The young people made friends, an took a fair interest in the school. But was the problem of what to do, when ther was nothing to be done, that wore on th aged farmer. He was used to getting u at five in the morning and, if not taking hand in the field, seeing about little affai around. It had been a habit of a lifetim to be busy from five in the morning t the day was over. Sometimes the wor came heavier than he wanted it, but alway there was something to occupy his mir and hands, if he wanted to do it. So h would run up to town and try to find com fort in talking to people there. But alway there was something lacking. He was fish out of water. A lifetime's habits can not be changed by a wish. He worrie more and more. He became an easy mar for disease. The arteries and heart tha had been used to strenuosity, and wer distended, became hardened. Physical he was going down, and mentally he wa unhappy. In a few years he suffered th natural consequence of ill-considered a tion, and died, in all probability ten yea sooner than he would have done had h kept going.

Not always is this the case. It depend a great deal on the temperament of th individual person. If he is inclined t worry and fret, he is worse off than th man who takes things as they come, wh can find little ways of amusing himse whatever they may be.

The most dangerous experiment, b cause it so often fails, and the most plea ant when it succeeds, is living with th children. It is a rare instance where th children of the [CONTINUED ON PAGE 2

Is This a Hunch for Your County Agent?



SO FAR as is known, only one or two of the 5,000-odd farm and home demonstration agents in the United States travel on motorcycles. While this method may be novel to those who ordinarily associate the county agent with a jitney, to Agent C. B. Faris, of Greenwood, South Carolina, this manner of getting about is a most practical proposition.

If cost of operation and ease in covering one's territory are taken into consideration, Mr. Faris feels that the use of the motorcycle approaches the ideal. Certainly it is the cheapest mode of travel and the best from many standpoints. Backward farms become accessible, and "pig paths," as the saying goes, are easily found. Many places almost entirely inaccessible to the car are easily reached by the motorcycle, and the folks that need the demonstration and extension work most urgently are quickly reached.

Mr. Faris began his demonstration work with an 11-horsepower motorcycle and covered his whole county with the greatest facility. Then someone persuaded him to purchase a car—and thereby hangs the tale. Nothing could have pictured more forcibly the contrast between his motorcycle and his car than his attempt to use the car as he had used the cycle. The cost of operation went up and his efficiency went down. His reputation for getting to meeting places on time went out. And his popularity began to decline as well.

The trouble arose from the fact that formerly Mr. Faris had not been accustomed to consider the time on the road, from place to place, as worth anything. Speed was essential, for his county is large. When he attempted to make the old schedule he found that the car was shaking to pieces and the repair bill was climbing. Of course, the car had a great many advantages over the motorcycle in comfort, convenience, and for the purpose of taking out friends. After one year's experimenting, however, he sold the car and went back to the motorcycle.

This time, however, he bought a side car, attaching it to his motorcycle—combining the best qualities of the automobile and the motorcycle. The side car is easily detachable and extremely handy. When he rides "solo" Mr. Faris obtains a mileage of 40 miles to the gallon of gasoline; when he attaches the side car he cuts his mileage down to 30 miles to the gallon. One half of the amount of cylinder oil is required by the motorcycle than is generally used by the automobile, and the amount of money spent for repairs is incomparably insignificant. Where personal repairing on the car is beyond the reach of many, the type of mechanical work necessitated by the use of the motorcycle is within the reach of the majority.

It is probably the element of danger, thinks Mr. Faris, that keeps many of the agents from riding a motorcycle. His experience demonstrates, however, that with proper exercise of care and common sense the motorcycle is no more dangerous than any other vehicle. And as for covering territory and getting work done—why, when a man has seven commercial orchards and 150 home orchards to look after, to say nothing of all his other work, he's just naturally got to put some speed into his work.

Mr. Faris considers that the use of a motorcycle is the cheapest, most comfortable, and most rapid method of travel for county-agent work.

Certainly, in his khaki suit and on his khaki-colored motorcycle, he not only acts the part of a highly specialized and very necessary government agricultural worker, but he also looks it, and his people and superior officers consider him so.

S. G. RUBINOW.

Farmers I Know Who Save Money by Hauling with Trailers

By H. W. Perry

General Manager Trailer Manufacturers Association of America

IN THE August issue of FARM AND FIRESIDE there was an article by D. S. Burch outlining the important points to consider before you buy a motor truck.

However, here are some additional facts o consider—facts about trailers for trucks nd automobiles. The addition of the ght kind of a trailer might make the buy- g of a truck a time and money saving roposition for you, whereas about the ailer you may not yet be in position to t a truck and make money thereby. nder any circumstances, the right kind a trailer means money saved on hauling. Even if you don't have a truck, a trailer ay be used to advantage by hitching it your car, no matter what kind of car is.

The majority of us own cars, even ough we may not own trucks. In either se we can use trailers to great advan- ge. With a passenger car and trailer u can do all the hauling needed for a all farm, while with a truck of one or o tons' capacity and a trailer or semi- iler you can do as much hauling as four six teams.

If you want a trailer and don't know actly what kind is suited to your needs ite to the Editor of FARM AND FIRE- DE, 381 Fourth Avenue, New York City, ling your hauling problems, distance m market, and road conditions, and he ll get you the information you want out trailers.

To show you how the trailer is working t on farms that have them, take a few amples:

A certain cattle breeder in Arizona, for stance, has hauled a two-wheel trailer ,000 miles behind his light runabout, d says $15 would cover all the outlay has made on the trailer. He says:

"I have carried cows, calves, bulls up a ton weight; lumber, grain, large trees, od, coal, and many other items used on farm. Such a vehicle is indispensable me, and I think would be more generally ed by farmers if they realized the many es the trailer can be put to."

A fruit grower at Dawson, Georgia, uls peaches and cotton to market with ight car and four-wheel trailer. He has uled six bales of cotton at a load with is outfit, and brought in loads of hay d peaches to town.

"The greatest beauty about the trailer," id he, "is the satisfaction of knowing at your load is getting on all right. You n't have to look around to see—all you ve to do is just drive. Out of over a ndred loads I have made myself, I never d to stop to readjust a single load to ep it from falling off. My regular load as 12 crates on the automobile and 48 on e trailer, which I hauled a distance of ree miles. It would take me thirty inutes after leaving the car to go to my chard and load up and get back. The aviest load I hauled during the rush of e season was 60 crates in the trailer and in the automobile, the crates averaging little over 52 pounds each."

When the Government contracted with cattle ranch company near Bakersfield, alifornia, for the entire hay crop from s 3,000-acre ranch, a condition of the ntract was that the hay would be re- oved and shipped at once. To accom- ish this a 3½-ton truck and trailer ave been hauling 20 ns of baled hay six ays in the week, mak- g two round trips ily over a 34-mile run, ith 130 bales weighing ver 10 tons. Seventy ales are loaded on the uck, and 60 on the ailer. The truck and ailer go into the fields o load. When the round is soft from ir- gation a four-horse eam hauls the trailer, ith 35 bales to the ad, where 25 more ales are put on and e trailer attached to the truck and hauled away to Wasco.

Some time ago a cattle grower in California was unable to secure cattle cars for shipments by rail to Bakersfield, and decided to try hauling the cattle over the new highway with motor trucks and trailers. He was surprised to find that it was cheaper than to ship by rail, besides being quicker and more certain. Large numbers of live stock are now hauled to the stockyards in Indianapolis, Omaha, and other packing-house centers by motor trucks from points 40 to 50 miles distant. Growers have discovered there is much less shrinkage in weight than when the animals are driven in on foot, especially in the case of hogs. In one case the saving in shrinkage on a shipment of 4,000 pounds of hogs paid for the freight charges.

A transfer and fuel company in Lincoln, Nebraska, writing of their experience with a three-ton semi-trailer they had been using for two months with a three-fourths-ton truck, say:

"The first load we put on it was 6,700 pounds of hay, bringing that load over 17 miles of very hilly road, and the engine did not seem to work as hard as the engines of our two and three ton trucks which were on the same trip, and were not carrying as much tonnage. Since that first load we have put this truck on every conceivable kind of work incidental to our business, and have loaded it with as much as 9,000 pounds and it has proved itself capable in every case. It is needless to say that we are perfectly satisfied with it. We think the trailer proposition is the coming thing."

Recently a single motor truck drawing four trailers hauled 70 head of sheep and 17 steers 90 miles from Dallas to Farmersville, Texas. The total weight of the live stock was 29,500 pounds, and a third of the trip was made over black soil roads. This shows the possibilities of rural motor express lines operating two, three, or four trailers in trains, and the economy and profit that might be realized.

A fruit grower at Baldwin, Kansas, gets his apples to the railroad in a hurry and economically with a light runabout and small trailer:

"I have been hauling, per load, 10 barrels of apples, average weight 175 pounds per barrel, or total of 1,750 pounds, and driving at the rate of 22 miles per hour, over very rough roads."

Three two-ton semi-trailers are used by an operator with three one-ton trucks for hauling milk from Temperance, Michigan, to Toledo, Ohio, a distance of 12 miles, one third of which is over very badly worn macadam road full of holes. Each outfit makes two round trips a day, or 48 miles, and the schedule is maintained every day in the year. Each trailer load consists of 53 cans of milk, weighing 110 pounds, or a total load of 5,830 pounds. The average running time is one and one-fourth hours each way and one gallon of gasoline is consumed on the 12-mile run. The outlay for each truck and semi-trailer unit, which does the work of a two or two and one-half-ton truck, was $1,100. The gross earnings of that unit are $10 a day. The driver is paid $2.50 a day, and the average expense per outfit for gasoline, etc., is figured at $1.25. Under good working conditions a day's work of two round trips is done in five hours.

A dairy farmer at Grafton, Ohio, covers a 25-mile wholesale milk route daily with a one-ton two-wheel trailer drawn behind a runabout. During six months' use he has not missed a day, nor had any trouble with the trailer.

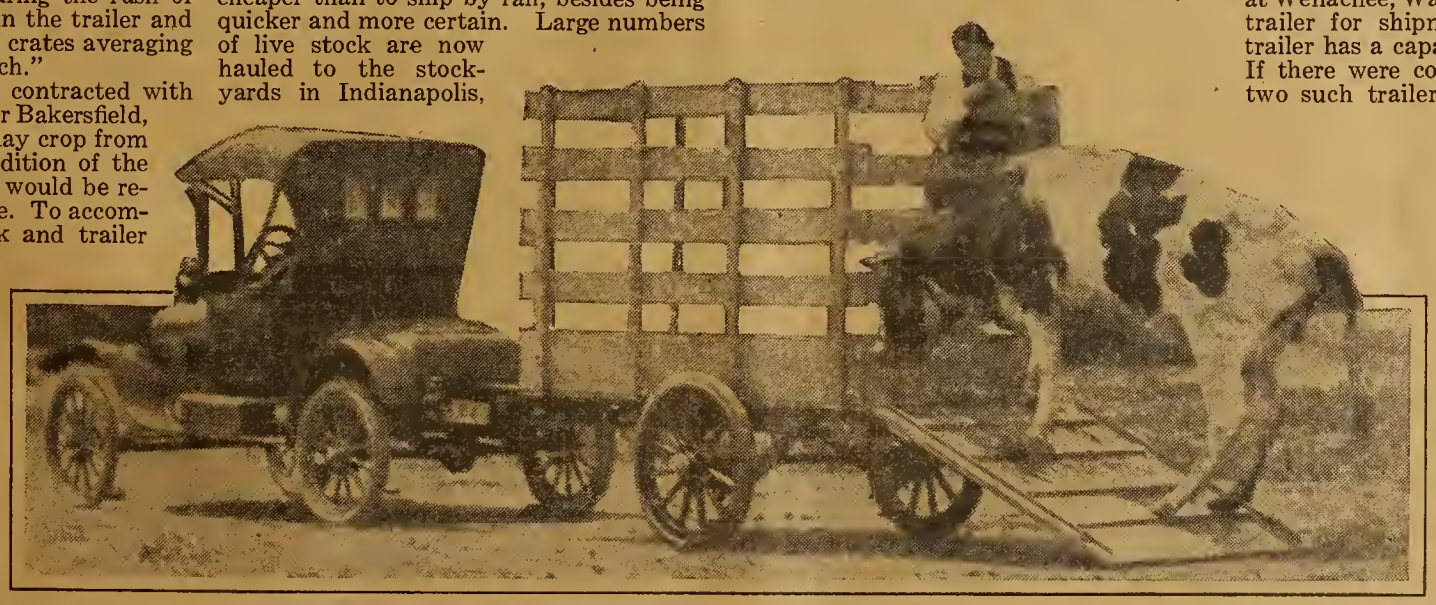
Crated apples are hauled to the railroad at Wenachee, Washington, with a truck and trailer for shipment to the East. The trailer has a capacity of two to three tons. If there were concrete roads all the way, two such trailers could be towed by the truck.

Ninety Miles a Day, With 10 to 14 Per Cent Grades

Huge loads of baled hay are hauled long distances to market by a truck owner in Oxnard, California, who tows a two-ton trailer behind the truck. The trailer has run more than 3,000 miles, making daily trips of 90 miles and negotiating grades of 10 to 14 per cent.

From these few examples it will readily be seen that farmers put trailers to many uses, with runabouts, touring cars, or trucks for draft

[CONTINUED ON PAGE 12]



This is the Arizona cattle breeder and his two-wheel highway cattle car drawn by light runabout. This has run 15,000 miles, and carried cows, calves, bulls up to a ton weight, lumber, grain, large trees, wood, coal, etc. The owner says it is indispensable to him, and he thinks trailers would be used more generally by farmers if they realized the many uses to which they can be put. A trailer doubles the capacity of your truck, and makes a pleasure car really pay

The Season's Greetings—Together With Some Thoughts on 1920

By the Editor

YOU and I, as citizens of the United States, are facing a new year—a year which promises, by all the signs, to be one of the most critical, not only in your affairs and mine, but also in the affairs of the country we live in and love.

It will do us no harm to stop and think a minute about what this means:

I, for my part, believe in the United States of America with my whole heart and soul. I know you do too. I believe in the principles on which it is built. I believe in the honesty, sincerity, and right purpose of the men and women who live in it.

I believe that the people of this country are at heart essentially fair, and decent, and peace-loving. And I believe that, no matter what happens, these good traits of our character will in the end prevail, and that the turmoil, strife, and bickering, which is the fruit of misunderstanding borne of agitation by that very minor minority of our citizenship whose members have permitted their appetites and desires to get the better of their sound judgment, will in time subside and eventually pass away.

Come what may in our affairs this year, I shall unswervingly believe in the fundamental soundness and integrity of the man in the street and the *man with the hoe*. I shall never for a moment forget that following every great war there has been an emotional upheaval which has thrown its participants back on their haunches gasping and dazed from the reaction. I believe that is the condition we find ourselves in to-day. And even as other upheavals have quieted themselves following other wars, so also shall this one pass away.

Public opinion is the ruling force in this country. And public opinion is essentially fair and just. If this group of men or that deserve so-and-so, they will eventually get it. If they do not deserve it, they will not get it. So I am not worried about the frenzied cry of "Rights!" which splits the air. Nor do I fear bolshevism, nor socialism, nor anarchism—for I know these things are not in the hearts of the people. And what is not in a man's heart you cannot make him live by.

In our national drama, as we play it through the coming year, the characters will change. There will be defeats and victories; there will be flux and change, actors will give place to new ones on the national stage, but the play will remain the same—a drama, not a tragedy.

Now what can you and I do the sooner to drive away the clouds? Just this: Go on as we have thus far come, doing our daily work to the best of our ability, being clean and decent, and fair and honorable, in our relations with our fellow men, to the best of our ability and according to our rights.

Our job here on FARM AND FIRESIDE will be to hold an even keel, and not be swayed by passing winds that blow. We shall in the future, as in the past, steer clear of isms and ologies, of utopian dreams and gloomy forebodings, of quacks and fakes of all kinds, whether they be cloaked in the guise of street-corner medicine men, political calamity howlers, or social alarmists. We shall go on to the best of our ability, basing what we say and do upon the sound principles of true Americanism, which is nothing more nor less than common sense and common decency, striving to make ourselves useful to you in the things you are doing, and hoping that we shall in some measure succeed.

I leave these thoughts with you, together with the wishes of myself and the entire FARM AND FIRESIDE staff, and all the officials of The Crowell Publishing Company, for a Merry Christmas and a Happy and Prosperous New Year.

GEORGE MARTIN.



FORGOTTEN

It's a Tough Crop—But There's Satisfaction in It

By Bruce Barton

RECENTLY I noticed a discussion about the problem of the hired man on the farm.

It took me back to the summer that I spent as a hired man, in a section of the country where everybody had to put in about a dollar and a quarter's worth of work to get a dollar out of the soil.

Even though all of us were poor, there were social distinctions in that community none the less. The hired men were in a class by themselves, and they knew it.

The owners of the farms went to church, but the hired men didn't go; they generally congregated Sunday morning in the vicinity of the livery stable.

They were not invited much to parties, nor did they join the lodge.

They were a real "problem" indeed, and the fault was partly theirs, and partly that of the men for whom they worked.

Since then I have been a hired man in the city, and I have been an employer of hired men.

And I have asked myself often: "What ought a hired man to expect from a job? What should work give to a man if it is to take his active life in return?"

Two things at least, it seems to me:

The promise of a home of his own and of ultimate independence.

Progressive concerns in the cities are more and more recognizing this as a fundamental truth. One big company I know whose profit-sharing system guarantees to any man who stays with it twenty years enough to keep himself in comfort after that.

On the farm such a plan is impossible, but the spirit behind the plan can prevail. The man who works can be made to feel the job he holds is not a blind alley leading nowhere, but a path leading forward to better things.

Recently, the branch manager of a large company introduced the president of the company to a convention of salesmen.

He said to them something like this: "Now you can see what a fine president you have; you can trust him to take care of you so don't be forever asking for more money."

The president arose and announced that he would have to disagree with the branch manager.

"I want men around me who are after more money all the time," he said. "The man who isn't earning more every year, and expecting more, can work for someone else. I do not want that kind to work for me."

It seems to me if I were running a farm I would feel somewhat that same way. I couldn't raise the wages of the hired man beyond a certain point, but I could encourage the young man who was giving me a year or two of his life to look forward beyond the place where he would be a hired man.

I would rather have a year of the life of a young chap who was on his way to larger things—to a home and independence—than ten years of the life of one who had never raised his eyes beyond the present hour.

And at the end of the way, it seems to me, I would find some satisfaction in saying to myself when I figured up the total of the crops that I had raised:

"There's one crop more—those chaps who spent a little of their lives with me. I helped to keep ambition alive in them, and passed them on a little more confident of themselves than when they came. Every one of them is on his own, and doing well to-day."

Of all the crops we work with, the human crop—which includes our children and the younger men who work with us—is the most difficult.

But there's a sight of satisfaction in it when it turns out right.

Chances My Folks Have Given Me to Make Money on the Farm

Prize letters written by boys and girls who read Farm and Fireside

First Prize

Winner: Otho Parrett
Medford, Oklahoma

WHEN I was nine years of age my father gave me a small ruptured pig. He gave it to me because he thought it would die soon, but as soon as he gave it to me I asked the county agent to come out and help me cure my ruptured pig. The next day he came and fixed my pig, and within two weeks my pig was well.

Now she was about six months old, and when she was eleven months of age she farrowed twelve pigs, but the first week four of them died, but the other eight grew very fast. When these pigs were eight months old I traded one pig and $12, which I had earned hoeing my father's garden, for a fine two-year-old heifer. This made my heifer cost about $25, but before I had kept this heifer six months I sold her to my father for $65. I went to Anthony, Kansas, and bought a two-year-old Holstein heifer for $65. Three months after I bought her she had a fine bull calf, which I was offered $25 for, but I refused to take it. When this calf was about four months old I traded it and another small calf which I owned for a yearling mare colt, for which I was offered $100, but I refused to sell her for that.

Now I was ten years old, and had worked for my neighbors until I had earned $30, with which I bought two full-blood Poland-China sows for $15 each. When I bought these two sows they were four months old. When they were one year of age the two farrowed 15 pigs, one farrowed nine and the other six. I had agreed to give my father one third of the pigs for their feed. Later I sold my ten pigs to my father for $30 apiece. In the fall of 1917 I bought 3½ bushels of wheat. My father planted the wheat for me. All together I made $120 on my wheat crop.

I sold my two sows for $75 each. I invested my $100 from my pig money, my $120 from wheat money, and $150 from my two sows in Liberty Bonds and W. S. S.

On August 21st my father and I had a sale. My share of the sale amounted to $347.50.

My Holstein cow sold for $103; my red cow sold for $93; my one pig I had left sold for $17.50; my red calf sold for $29.50—a total of $243.

I had many other things too numerous to mention. After the sale I cashed my bonds and W. S. S. All together it amounted to $861.75. Besides the $861.75 I have left one mare and colt and seven sheep. My main start came from that one ruptured sow.

Second Prize

Winner: Marjorie A. Young
R. F. D. 3, Mexico, New York

FIVE years ago my mother, who hatches thoroughbred White Leghorn chicks to sell, told me if I would wash the dishes for her during the hatching season she would pay me afterward. She advised me to purchase a setting of thoroughbred Fawn and White Indian Runner duck eggs, which I did.

I hatched eight ducks, two females and six males. I sold the ducks, and purchased another drake not related. In January one duck was killed.

So I started the next season with a pair. The remaining duck laid enough eggs that year to bring me $7.84. I set some of those eggs, and raised 30 young ducks, of which there were 15 females and 15 males. I sold the drakes.

I have always purchased all of my feed, which my father has brought from town. For a year or two, until I got well started, I just cleared plenty of spending money.

I have always bought the very best thoroughbred strain of prize-winning drakes obtainable. I have sold eggs for hatching and drakes for breeding purposes, and shipped the remaining eggs to New York to be sold on commission.

I only have facilities for wintering about 30 ducks. Last year, after paying for all my feed and charging up 12 bushels of corn given to me by my father, I cleared from breeding stock, eggs, and ducks sold, $91.93, and had 30 ducks and three drakes remaining. Last spring I sold 60 settings of hatching eggs, which went to twelve different States in the Union.

From the money I have made out of my ducks I am the proud possessor of $50 Liberty Bonds of the fourth and fifth issue, three War Savings Stamps, and quite a sum of money in the savings bank, and, besides, I have not yet sold my young ducks for this year.

My success with my ducks has greatly increased my interest in the farm and farm work. I feel as though I am one of the stockholders in the firm. My mother, who is an experienced business woman, says that it has taught me business.

I am happy here on the farm with my beautiful flock of thoroughbreds, which everyone admires as they pass by.

I wish to say before I close that some of my success is due to my mother, who is a very practical business woman. She has always given me good advice on the methods of caring for my ducks, also advice on how to dispose of my stock.

I wish to thank the Editor for giving us this opportunity of expressing our appreciation of the farm.



This is Marjorie Young's flock about which she speaks in her letter

Third Prize

Winner: William Fowler (Age 16)
Jonesville, Michigan

I THINK my father gave me as good a chance as a father ever gave his son. Last winter my father said:

"Do you want to make some money on chickens?"

I said that I would like to. Therefore he gave me a 500-egg incubator and 500 eggs.

I had to fill the lamp every night, and turn the eggs night and morning. On the twenty-first day I was anxious to see how my eggs had hatched. I could see little chicks, but didn't dare open it until the next morning. The next morning I fixed my brooder, and then opened the incubator, counted my chickens one at a time, and I had 472 chicks. I had to buy feed for them. When they were two months old I counted them, and only 16 of them had died.

That left me 456 chickens. When they were three months old they were quite large, and I sold them as broilers. I sent them to Detroit. They averaged close to 1½ pounds apiece, at 30 cents a pound. They all weighed together 675 pounds. I got $235.25. They paid express. I used $12 worth of feed, and that left me $223.25 for myself.

I am going to run a poultry farm for myself, like my father does. Don't you think my father gave me a chance to make money on the farm?

I never have won a prize yet, but hope to this time.

[You won this time, William.—EDITOR.]

Fourth Prize

Winner: Ethel Farris
Brown's Grove, Kentucky

WHEN I was 11 years old my father owned a 160-acre farm, one half of which was in timber. On the other half we raised corn, tobacco, wheat, etc.

Father would have about six acres of tobacco, and I always had an acre or two, of which I got half. This kept my courage up, and I didn't mind the work. That year I got $125 out of my tobacco. When I was fourteen years of age Father gave me a little sow pig. I fed her lots of buttermilk, plenty of corn, etc. When she was one year old she weighed 250 pounds. When she was two she brought out twelve nice pigs, ten of which lived, and when they were one year old they averaged 175 to 225 pounds apiece. I sold them all except three, which brought me $290.

The next year she brought out five pigs, four of them lived. I fed them good, and when they were eighteen months old they weighed 300 pounds apiece. By this time the price on hogs was raised, and I sold the four for $200. This made me $490. I made $100 worth of tobacco this year. The total amount so far for hogs and tobacco is $715. I put it all in the bank. I intend to get a car next spring, but I still aim to raise my hogs, and have my tobacco crop. I am sixteen years of age.

Fifth Prize

Winner: James C. Huferdick
R. F. D. 3, Quincy, Illinois

I AM a little boy twelve years old. I live on a farm in Illinois. I like the farm, and will want to live on one all my life; but it has been only a short time since I have made up my mind to like the farm. My father said I was too young to realize how many more attractions there are on the farm than in the city.

I never had anything on the farm to interest me until this spring, when a neighbor of ours took me to his pen of Chester Whites and showed me his little spring pigs, which looked very nice, all cuddled up with their mother in the spring sunshine. But among them all was a little runt pig, that everybody said was the runtiest of runts, which he said I might have if I would sort three bushels of potatoes, which at first thought looked pretty big to that pig; but I wanted to keep on friendly terms with my neighbor, so I went to work sorting as fast as I could, as I was becoming more anxious every minute to go home with my pig. In half an hour I had finished, and went home. I showed it to my father, who was very much pleased. He made me a small pen, and I gave it its meal of warm milk. It drank it all, and then laid down feeling much better than it had for a long time, as it was the first good feed it had had. After that I fed it in small quantities six times a day, and in a month it had outgrown all the other pigs of the same litter. I named it Tom Thumb, but since it has outgrown its name. To-day, at the age of nine months, it weighs 200 pounds.

Another neighbor who heard of my success with little runts met me one night coming home from school, and said he had one that I might have if I cared to bother with it, so I went home and got it. It was a little Poland-China pig that was very small and sickly, but I thought it would pull through. Its name was Liberty Girl. I fed it as I had the other one, on milk and weeds; I gave it but little corn, as I did not want it to fatten. Everybody thought it was wonderful how that pig grew, and when my neighbor who gave me the pig saw it after I had it three and a half months offered me $25 for my pig, as he said it was a better stock hog than any he had. So the next day I put it in a crate and took it in my litter wagon to my neighbor. He was very much pleased to get the pig, and gave me a check for $25, and believe me, boys, I walked down the road feeling as proud as a king. That afternoon my father took me to Quincy, and I deposited my money in the bank, which made me $50 for my summer work, as I had earned $25 strawberry-picking. I asked my father what I owed him for feed, and he said that as I helped him with the summer work he would call it square.

So believe me, boys, the farm for me, and when I get big I expect to own a farm of my own, and a large herd of hogs, as I am learning to save young. With these and FARM AND FIRESIDE you will make a success in farming.

Sixth Prize

Winner: Frieda Stamm
R. F. D. 5, Muscatine, Iowa

WE HAVE a 10-acre orchard on this farm, and beneath the fruit trees there are an awful lot of blackberry bushes, and we had a fine crop last year; so first we picked for ourselves, and I also picked a lot to sell. We got $4 a crate for them, but we couldn't pick them all, and the men got awful busy, so we put an advertisement in the paper—eight cents a quart in the patch. Well, you ought to have seen the people come! We hadn't any scales, so I had to measure them in crates, and half of the money was mine. Well, my share was about $60. Now, the problem was how to increase it. Well, I bought two sheep for $20, and they had three lambs together, and I raised them and got $9 worth of wool from the old sheep.

In the fall when the corn-shucking began, and we didn't have much work in the house, I would go out and help, and every afternoon that I worked I got a dollar, and for a couple of weeks I got the job of pumping water for 26 head of horses, and there I got 50 cents a week.

This spring one of our old hogs had 13 pigs. She lost two, and a third was beginning to look runty, so Dad said that if I raised it I would have a good brood sow next spring. I took it when it was about two weeks old, and raised her, and maybe she will raise pigs next spring.

I take care of all the chickens, and I hatched about 600 this spring, and so the folks said I could raise some of my own. So I got some Leghorn eggs, and I now have about 50 hens, and as their eggs will be white I will be able to tell the eggs apart, because the other hens lay brown eggs.

The blackberry crop was poor this year, so I will make it up somewhere else. But I surely do hope all farmer girls and boys will stay on the farm.

Seventh Prize

Winner: Robert Bonner
Manchester, Georgia

IN THE spring of 1918 our county agent asked me to join the Pig Club. Mama bought me a nice little Hampshire pig and I got busy.

Last fall I sent the pig to the Southeastern Fair at Atlanta, and she won first premium in Swine Department and first premium in Boys' Pig Club, and a scholarship to Boys' Short Course at State College of Agriculture in Athens. I hope some day to finish my education there.

We did not have our county fair on account of influenza, or I would have won quite a bit there. I invested my premium money in War Savings Stamps.

In January Lady Bess brought four fine pigs, two of which I kept, and sold the other two. Now she has six more pigs, four of which I intend sending with their mother to Atlanta in October to compete for a tractor. [CONTINUED ON PAGE 28]

What Interests You Most When You Go to the Fair—And Why

By B. H. Heide

Secretary and General Manager International Live-Stock Exposition

A GREAT many of the good farming people all over the country feel the need of a community fair, if they have not already got one, where they can get together and exhibit the things they have grown and raised, exchange views and experiences, listen to good speeches and music, and have a pleasant and profitable time.

In many places this has not been done because there is some doubt in the farmers' minds as to just the best way to go about it. They do not want to have the wrong kind of a show and see it fizzle out, so they don't have any.

As secretary of the International Live-Stock Exposition I have been asked to tell you what we have learned in handling the International that might be of use to your community in organizing your local show. This is a difficult task, but I will do my best to cover the points you may be interested in.

First of all, the foundation stone on which the International rests is education. Its object is to have the people go home with a better knowledge of their own business, and with the business of agriculture generally, than when they came. I believe this is a sound foundation for any such exposition, whether its scope is world-wide, as that of the International, or local, like your own fair.

You will find that the people who attend your fair are at heart the same folks who attend the International. They are seeking the same things in life. They all want to learn how to produce more and better things on their farms, so that they can dispose of them to better advantage on the market, which in turn will give them more means with which to live better and enjoy life. When you sift it down, that is what we are all working for. And anything we can give each other that will help us accomplish that is apt to be gratefully received.

I don't mean that this purpose necessarily excludes entertainment features. I do mean that the entertainment features should be so interwoven and linked up with the teaching features of the fair that the people who attend can enjoy at the same time as they learn.

For instance, we have demonstrated throughout the twenty years of the International that such an institution may be placed on a permanently successful basis even with a high educational standard, eliminating such vaudeville stunts as many contended at the outset would be essential to the maintenance of public interest.

Although of secondary importance in the plan, entertainment is not neglected. To hold the interest of our evening audiences we have developed a class of program which, while devoid of all semblance of theatricals of the vaudeville type, has stood the test of years, filling the vast International amphitheater nightly, and holding the attention of the audience until the final event. Snap and action are the keynotes of this program, which is carried out on a time schedule rigidly adhered to, the audience always leaving in good season and, therefore, in a satisfied frame of mind. We have determined that "million-dollar parades" of live stock, driving exhibitions, and athletic displays that have connection with horsemanship satisfy our audience, especially when set to music such as the public taste demands. While we do not feature music, popular airs predominating in the program, we realize that the public demands merit in an orchestra.

I think you will find that snap and action in your program will have much to do with the success of your fair. Don't let anything drag. In exhibiting, present your features quickly, have them come into view rapidly, have as much snap and go about them as possible while they are in sight, and take one off and run on another a wee bit before the audience has had all it wants of that one thing. Don't make your programs too long. Rather make them too short than too long. Then the crowd will always come back for another one. That has been our experience.

Another important thing we have learned is to make the show appeal to every member of the family—have something in it of particular interest to each one. The things to have in your local show you can determine by making a list of the things the fathers, mothers, boys and girls of your community are most interested in. You could send out a questionnaire asking representative families in each neighborhood what they would most like to see exhibited at the fair, what problems in agriculture they are most interested in.

The International, for instance, knows very definitely what it is trying to do, and it builds every part of its annual exposition on that foundation.

For instance, one phase of the International that has been of interest from the time it started, and to which much of its success may be attributed, is a wide range of contests. You can map out just as good local contests in breeding, feeding, home economies, and other things, as the International has on a larger scale. The under-lying idea is the same. It is based on the desire of every ambitious human being to excel the other fellow.



B. H. Heide

Creation of a love for domestic animals in the hearts of Chicago's children has been aimed at by throwing open the gates on the closing day. On this occasion juvenile enthusiasm runs high, many of these urban-bred youngsters having no other opportunity to make the acquaintance of the animal kingdom. You could make your local show do the same for the local youngsters.

For the live-stock breeders of North America and Europe the International is an annual round-up event, the champion of the United States, British, French, Belgian, and Canadian shows meeting for the season's finals. In this respect the International is educational in the superlative degree, affording stockmen an opportunity, otherwise impossible, to create standards for individual operation, plan enterprises involving the work of a lifetime together, with investment of large amounts of observation and experience thus made possible, insuring success. We endeavor to inspire confidence by convincing the breeder that we have his interests at heart. Each International creates invaluable acquaintance and friendship among live-stock growers scattered all over the country, to whom this event affords an opportunity to get together. It is essentially a convention. You can make yours do the same things locally.

In this arena the producer and consumer meet on common ground, many eliminating false impressions that work injury to both. The city dweller has an opportunity to realize the complexity of the processes necessary to fill his larder, the man from the country to realize that without the consumer his efforts would be abortive. The consumer, after surveying these herds of good cattle, hogs, and sheep, is inspired with a sense of the magnitude of an industry that has never been understood and about which most of the uninitiated entertain hazy ideas.

The co-operative idea is made paramount. Here the breeder of commercial cattle meets the Corn Belt finisher, the International having brought different sections of the country into close contact. We make an unselfish appeal to the farmers and breeders of the country to promote their own interests, giving them active co-operation, and inducing them to look to the International as a creator of standards as near perfection as attainment is possible. It is in the establishment of these standards that the institution serves its most useful purpose rather than in staging an annual spectacle. Yours can serve the same ends in your community.

Since the early period of the Exposition we have from time to time introduced such educational features as were considered consistent with our standards. Demonstrations of the value of cheaper cuts of meat, exhibits of commercial feeds, domestic science lectures, and cooking exhibitions are all included in this program.

Our latest innovation is a grain and hay exhibit which is expected to serve a useful purpose.

In short, the International Live-Stock Exposition aims at elimination of the scrub, which has been the bane of the industry, solution of such feeding problems as each season develops, extension of the influence of our domestic animals on a profitable basis, realizing that without live stock agriculture cannot be successful. Our sales of pure-bred and commercial live stock furnish a means of disseminating pure-blooded animals, and afford the breeder an opportunity to display his products that could not be provided by individual effort. You can use these same ideas, scaled down to suit your needs, I feel sure.

The International lasts eight days—no longer, no shorter. A local fair can be much shorter—say, two or three days. By arranging our program, every minute of this eight days is crammed with interesting things.

The show is divided into two classes—that is, the mornings and afternoons are devoted to education, and the evening to educational entertainment. In the twenty years of the show no changes have been made in the form of our entertainment. We have found that horses and other live stock are what the farmer wants in both education and relaxation. The saddle horse, the driving horse, the hunter, ponies, drafters, and our parade of live stock is all that farmers want during the evening.

Therefore we endeavor to have the best horses. And while these horses are pleasing the visitors, they are bringing home the lesson of better stock. Also every show is a contest, not merely a performance. Every horse in the arena is competing for a prize, so the drivers put them through their best work.

We find the hunters are good entertainment, especially when the bars are set high. As soon as the rider starts his horse off on a run the people hold their breath, and there is a sigh of "ohs" after he has cleared the barrier. Applause is what guides us in selection of features. The spirited pure-breds hold attention at all times.

The evening program is always finished in good season, so that the people can get home and have a good night's rest. Long-drawn-out affairs are not entertaining.

We have the stockyard cowboys put on a push-ball and other similar contests, which are very popular. We also have movies—pictures of the various breed associations, or other educational films. Most people are lovers of the "movies," and we have capitalized this in the way of teaching them some things through films, and at the same time providing entertainment. There is plenty of popcorn, peanuts, and pop.

Each year we add new features and exhibits. And we organize so they will cover everything pertaining to live stock and farming. Not many farmers ever saw blue grass over five or six feet tall. We have some this year better than seven feet high. This is entertainment in itself, and there will be all kinds of speculation as to where and how it was grown. These things attract and hold the farmer, and help to make the show a success.

We put on no exhibits ourselves, but arrange to have it done. For instance, when we wanted an exhibit on corn-growing in its various stages a university had pictures taken of the time when it should be done, and showed pictorially corn production, cultivation, and harvesting step by step. This exhibit was in the same building with the corn show. Let your local state experts arrange your local exhibits. Any show held in any section must have exhibits which are characteristic of that locality.

Prizes help to attract, and should be liberal. There is [CONTINUED ON PAGE 26]

Farm and Fireside Now Has Eight Corresponding Editors

THOSE of you who have watched the judging of live stock at state fairs and at the larger sectional and national shows need not be told that the accompanying picture is a likeness of H. H. Kildee of Iowa. But whether you know Mr. Kildee at sight or merely through the splendid work he has done in the interest of better live stock, you will be interested to learn that his name is the most recent to be added to FARM AND FIRESIDE'S group of corresponding editors. Mr. Kildee will serve you by giving you personal answers to your inquiries about live-stock and dairy topics.



This is H. H. Kildee, Farm and Fireside's new corresponding editor

Mr. Kildee is a bred-in-the-bone farmer. As a boy on his father's farm in Iowa he was a live-stock enthusiast, and that enthusiasm for his work has meant one splendid advancement after another. He is now head of the Bureau of Animal Industry at Ames, which, with due respect to the capable similar departments in other agricultural colleges, is unexcelled. Any live-stock and dairy questions you want answered should be addressed to him, enclosing a stamped self-addressed envelope, care FARM AND FIRESIDE, 381 Fourth Avenue, New York City. THE EDITOR.

Do You Farm "Fast" Enough—Or Do You Lose by Being Slow?

By D. S. Burch

I HAVE found, in looking around, that the successful farmer of to-day, be he little or big, is the one who has worked out a system of quick turnover on his products.

"Turnover" means the length of time etween the date you invest your cash and abor in a crop and the date on which you et that cash back with a profit dangling o it.

Improved farming methods have been teadily decreasing this period of time beween investment and return, and it is the armer who does this most successfully who makes the most money.

One thing I have noticed about these uccessful "fast" farmers ("fast" being nerely another way of saying "quick urnover") is that the biggest thing they ount on to speed up their production is uality—pure-bred sires and high-grade eeds, everything of the best. Even the mall successful fellows find a way to get igh-quality materials to work with. Vhy this is so I will show you later on.

The successful speeding-up work of difrent farmers in different sections of the ountry causes us to hear some odd things bout farming nowadays—alluring tales f new opportunities north, east, south, nd west.

In most cases, probably, the greatest pportunities are right at home on your wn farm. You can apply on *your* farm he new methods that have made other rmers successful all over the country.

It is my humble opinion that it isn't so uch *where* you are, as *what* you are and hat you *do*, that counts. But there are hese changes of turnover methods taking lace in farming everywhere which you nd I will profit by studying. The quesion of turnover applies to every crop you ise, and to your whole system of farmg, whether you are a big farmer or a little he. It spells the difference between sucss and failure. It is a thing which no rmer, whether owner, tenant, or laborer, an afford to ignore.

The following incident told of the late ames J. Hill illustrates what turnover is, nd also shows how men of foresight invest berally when their money is safe, and hen they know they will get it back uickly and in increased amount.

When Mr. Hill was a section foreman e and three other men boarded at a small otel in a frontier town. Each was earng less than $50 a month, and each imagned himself as the one who received the enderest smiles of the winsome young oman who served them their meals.

"Let's give her a Christmas present," im Hill suggested the day before Christas. The others assented. "Will you ll give as much as I do?" To this also ney agreed, though not without some disay when he tossed a $20 gold piece on ne table. Two of the men reluctantly lfilled their agreement. The third had nly $10, so Hill advanced the other $10, aking his note for the amount. The purse f $80—a fortune in that town at the time —was duly presented to the girl, who hanked them cordially, and the following ay Jim Hill married her.

Few turnovers are so rapid as that, yet ready reward nearly always follows pracical ideas that can shorten the time beween investment and dividends. In the ast, farming has been a business of slow eturns. I am speaking of average pracice. For crops to grow and for animals o mature required a certain time, preumably a fairly definite fixed time.

The present truths which we must recgnize are: that farming is a business capale of highly artificial development; that noney invested may be turned over more apidly and make farming more profitable, nd that we must choose now between nany time-tried but obsolete methods of he past and the newer methods that require courage to adopt and skill to use, but ave proved superior under present conlitions.

Perhaps the clearest way to illustrate hese points is through typical examples. Here are some of the most familiar instances showing how the human brain has nade farming more artificial than is commonly realized, and further developments must be expected:

Incubation and brooding of chickens, grafting of trees, spraying of fruit, tile drainage and irrigation—these are all unnatural operations.

Silage, beet pulp, mill feeds, fish meal, and similar products are the result of special processes, but such feeds are recognized as economical and satisfactory.

Dehorning, castration, vaccination of calves against blackleg, inoculation of hogs against cholera, and similar operations are essentially artificial but are commonly and successfully practiced.

It is unnatural for a cow to give milk after her calf is weaned, or to give milk in quantities much larger than her offspring requires. Yet to be profitable, dairy cows must give a liberal milk flow practically the entire year—entirely unnatural, but necessary to civilization and also profitable to the owner.

It is even becoming profitable to give high-producing dairy cows lime and phosphate in mineral form. They need the extra mineral matter for large milk production just as laying hens need ground bone or oyster shell for egg production.

In other words, successful production of crops and live stock is no longer a business of letting things follow their natural course.

There are striking examples also of success in shortening the time of production without sacrificing quality—in fact, frequently improving it. Some of the work is still undergoing further experiment, but a great deal has become a part of practical farm operations. I refer to the development of early-maturing qualities in grains, vegetables, grasses, and especially early maturity in live stock.

Following its study of baby beef production, the United States Department of Agriculture has made some impressive statements which apply to present conditions, and also anticipate the future.

"The cost of producing beef," it declares, "due to advances in land values, feeds, labor, and taxes has increased to such an extent that feeders and breeders can seldom hold their cattle to advanced ages at a profit. . . . In the early days of the cattle industry, steers were kept on the range until from three to five years of age. The use of better bulls, with consequent improvement in quality and early maturity of market cattle, together with heavier grain feeding, has made it possible to put just as much flesh on the animals *by the time they are from ten to twenty months of age.*"

Striking as that statement may seem, the investigator adds: "With improvements in breeding and in feed-lot methods heavier cattle with more quality may be put on the market at even a younger age." If you can figure out a scheme to do this you will make a lot of money.



The most successful hog farmers of to-day keep good brood sows, feed them well, and raise two litters of pigs a year. Hog-raising on that basis means few losses, sturdy pigs and a quick turnover on the investment

We Are All in the Same Boat, and Somebody is Rocking It

WHEN we were a newspaper reporter in a certain Middle Western office, the boss had three huge signs posted up on the wall, each bearing a single word in letters three feet high. They were:

Speed. Accuracy. Brevity.

He meant that that was the way he wanted the work of that office done. The speediest, most accurate, and most brief among the men were always the boss's favorites—and the best paid.

The connection between that incident and you is this: Speed, accuracy, and brevity are just as important in the farming business to-day as they are in any other business. We are all in the Farming Boat. In the past it has been neither speedy, accurate, nor brief in getting us to the Shore of Good Profits. The leaders of modern methods—the up-and-coming farmers, both big and little—are deserting it. It is no longer safe.

In his article Mr. Burch shows us the new liner "Quick Turnover" drawn up alongside, and tells us how we can all climb aboard and ride quickly, safely, and surely to the Shore of Good Profits.

THE EDITOR.

Here are some of the advantages which you reap when you grow a marketable beef animal in about one third the former time. Young cattle make better gains—25 to 40 per cent more—than mature cattle on the same quantity of feed. The surplus feed and pasture may be used for keeping a larger breeding herd, which will produce more calves. Heifers when finished as baby beef often sell as well as steers. You have a greater choice in deciding on the date of marketing, an advantage if the market is weak or unsteady. By feeding calves as baby beef the money invested can be turned over within eighteen months.

The principal requirements are breeding cattle with good beef form and of good general quality. In addition the grower of baby beef must understand how to feed that kind of stock. He must know the values of different rations. He must feed a more expensive ration containing more concentrates than are required for older cattle. In brief, it takes more study, judgment, and experience to farm profitably than it ever took before.

Hog-raising offers even greater opportunities for a rapid turnover of funds invested. With good brood sows, proper breeding and feeding, it is possible to grow a 200-pound hog in six months' time from date of birth; and usually a hog of that size at six months is more profitable than a 300-pound hog at eight months or more. Better breeding combined with good care is perhaps the most effective means of growing live stock at a profit in the face of high prices for feed. And good blood is likewise a means of increasing the amount of profitable and quick returns when feed is home-grown or cheaply obtained.

Commenting on this important development in farming, an experienced live-stock breeder in Wyoming aptly sums up his observations.

"The pure-bred beef animal," he declares, "will make more beef of higher quality in a shorter time, and sell for more money because of the fact that there is less waste and more good palatable meat, than the scrub. The pure-bred dairy cow will produce more milk in six months than the scrub will in a year, and do it on less feed; and the pure-bred chickens produce more eggs by douole than do the mongrels."

The business principle responsible for profitable returns when animals mature quickly is the greater amount of nutriment converted into growth or other production in proportion to the amount required for mere maintenance. A growing steer eighteen months old and weighing 750 pounds needs about 1½ pounds of digestible protein in its feed a day, but nearly half a pound of that is required for maintenance, the remainder being available for growth. As the animal becomes larger the amount of feed needed for maintenance becomes greater, until at 1,500 pounds weight the steer requires daily about two thirds of a pound of digestible protein for maintenance—that is, merely to maintain its vital processes.

From this typical example the reader will see the advantage of early maturity from the feed standpoint. When an animal makes its gains quickly and is sold while reasonably young and small, its owner has paid a comparatively small amount for maintenance. He gets the animal to market after it has made the cheapest gains, and also while it has the quality that brings good prices. That explains why expensive feeds are sometimes the cheapest in the end.

Still another way to reduce maintenance costs for breeding stock is the sensible and thoroughly feasible practice of weeding out the slow or uncertain breeders, and in the case of swine of raising two litters of pigs a year from mature sows. In most all the Southern States two litters are practicable, and the same practice may be followed in the Northern States under favorable conditions of care and housing. The plan enables you to raise more pigs from the same number of sows.

Examples of the kind mentioned illustrate some of the methods already being used to shorten the time of producing farm commodities, and [CONTINUED ON PAGE 45]

My Experience With the Multiple Hitch—It Saves Me Time and Money

By Cyrus Grossboll

I BELIEVE in using anything that saves me and my two men time, labor, and trouble on my 600 acres at Petersburg, Illinois, where I do grain and stock farming.

So whenever I can I make my head do the work instead of my hands. That was the thought which led me to investigate the new multiple hitch. It has made a big saving of horse-power for me, and I believe it will do the same for you.

Of course, I always have more horses than I need for my work, because I keep about 40 head and sell some every year. But I firmly believe the hitch is a time, labor, and money saver for any man who uses horses.

Last winter, while attending a breeders' meeting at Springfield, I met Wayne Dinsmore, secretary of the Percheron Society, of which I am a member. He had been conducting the multiple-hitch demonstration, and I asked him if the thing was practical. He told me how it was working out West, where he discovered it, and where, he said, they found that with it they could do more work with a given number of horses.

I ordered the hitch from a firm in Chicago, and when the ground was in shape to work this spring the first thing I did was to hitch the horses according to the directions, and started plowing. The hitch worked well the first day, and I didn't have any trouble, even though it was my first experience. Of course, the buck straps were not set right, and the horses were a little new at working tandem fashion. Heretofore they had been worked four abreast in plowing.

It took about a half-day to get the horses used to being hitched tandem, and to get the buck straps the right length.

We have had no trouble since the first morning. The second day was fine, the team working as though the hitch had been in use for years, and we turned over five acres before knocking off. This performance was repeated the second day, and every day after that we used the hitch. All told, we spent five weeks doing the spring plowing.

About the first few days I took in other horses off pasture, and began to put them in shape to spell off the horses then plowing. I figured I would have the usual amount of shoulder trouble that is customary in spring, when the horses are somewhat soft and unused to the hard work of plowing. To my surprise I didn't have any trouble with sore shoulders; in fact, hardly a hair was lost.

I could hardly believe my eyes, and every night for the first ten days I looked at the horses. Finally I was convinced that the new hitch had done away with this bother.

Another thing I noticed particularly was that the horses did not seem as tired at night as they did when worked four abreast. I watched the horses the first few times around, and observed that they were not very warm, and they did not fuss and fight, as is common when driven four abreast.

A few of my neighbors, seeing the horses working in tandem shape, stopped to ask what I was doing. I took them into the field and showed them the hitch, and they watched the hired man make a few turns. I told how we were getting five acres a day out of the hitch. They told other farmers, and for the first two weeks I had quite an audience.

Since that time I have decided to buy another of the hitches, and some of my neighbors have authorized me to buy one for them too. The hitch is extremely simple; in fact, when I studied it, and saw it operate, I wondered why it had not been brought out years ago. It consists of an iron bar attached to the whiffletree to which the first team is hooked. This rod is about three eighths of an inch across, and the other end of it is attached to a chain which runs through a pulley and attached to the whiffletree to which the end team is hitched. The pulley is attached to the plow itself.

The first team only is driven, there being no ribbons to the second team, which is also the only team that is tied in and bucked back. This process of tying in consists of crossing ropes tied to the inside rings of the bits and fastening them to the hames of the opposite horses. This prevents them pulling apart.

Bucking back consists of tying a line on both rings of the bit of each horse, something like a check line, only that it converges into one line. A simpler way to explain this would be to say that it looks like a driving line on a team when it is finished, the exception being that the inside line is not crossed to the other horse. If the line were laid on the ground it would be Y-shaped.

These ropes are tied to the iron rod which passes between the rear team and is attached to the whiffletree to which the lead team is hooked.

It is the purpose of this bucking back to keep the rear team in line. If they are a faster team than the lead pair, they are held in check, because when the lead team starts it pulls on the iron rod, which, with the aid of the pulley and chain, retards the speed of the rear pair, because the chain is bolted to the whiffletree to which the rear team is attached—thus the first team is pulling against the second pair.



Cyrus Grossboll

I found after the first day that the chain on the pulley never varied an inch. The horses pull evenly, and there was no lagging. This hitch cost me $21, complete with the pulley, chain, and rod.

Four horses will eat a lot of high-priced grain and hay, and must be fed when not working; but fortunately I have pure-bred mares which I use for this work, and every year they give me a nice colt each, which is easy to sell at good prices.

I used four pure-bred Percheron mares, averaging about 1,700 pounds, on a gang, and plowed to a depth of seven inches. Horses of this weight are not essential, however, for I figure with this hitch there is at least 25 per cent more power than when horses are hitched abreast.

I believe that four horses, weighing as low as 1,200 pounds apiece, can go out on a multiple hitch and turn in four to five acres without much effort. My team turning in five acres a day gives me 30 acres a week. This is a very decided improvement over the old fashion of hitching abreast.

In the spring we plowed 150 acres in five weeks with the multiple hitch, and 60 acres with a sulky and a gang, to which the horses were hitched abreast. The working of two gangs of the same size in the same field offered me an opportunity to study the tandem multiple hitch, and the other way of four abreast. The multiple-hitch gang turned in five acres a day, while three to four was the best the gang with the horses abreast was able to do.

There is a big saving of labor in favor of the multiple hitch as compared with the old method, with its side draft of at least 25 per cent. An acre a day means the saving of two days, and in the spring this means a lot to the farmer.

Not only is it a saving in money, but when you figure how hard it is to get competent help it means more. It was because of this big saving in labor that I was able to get my corn crop in before the rainy weather. As soon as the last hill was planted it started to come down, and there was no let-up for a whole week.

During this time we put our machinery in shape for the summer work, and did tinkering around the place that we would have had to put in overtime doing. And after the rain ceased it was two or three days before we could get on the land again. By this time the corn was up enough for the first cultivating, and the weeds were beginning to put in appearance.

We had our cultivators ready, and went right out into the field, thus giving us a big advantage of getting the jump on the weeds before they got a chance to get a good start. If we had not planted all of the corn, by the time we got around to cultivating the weeds would have been as high as the corn.

With the elimination of side draft, I found the plows did work of better quality, and covered the thrash in good shape. The sod land was turned over in better shape, too. It was no trouble in keeping the off horse in the furrow, because there were not three horses pulling against the animal "in the trench."

I said lighter horses could do the work on a multiple hitch. I have big mares, because, as I said before, I sell off a few colts each year, and I find the drafters have a more ready sale than the lighter horses. But for the man who has light mares the hitch is just the thing. He can breed his light mares to draft studs and still get lots of work out of them.

Anyone who can drive a horse can run a plow and a multiple hitch. There is no trouble in making turns, either. We plowed within 16 feet of the fence, and this leeway is no greater than we allowed when we used horses hitched abreast. I imagine, however, that when six or eight horses are used it would require a greater space to make the turns.

Another important advantage I find in the multiple hitch is that a man can use it to break colts. Last spring we used green colts off and on, and experienced no trouble. They went right along with the rest. Put them in a hitch abreast and they will cause all kinds of trouble. They can't get away when hitched tandem.

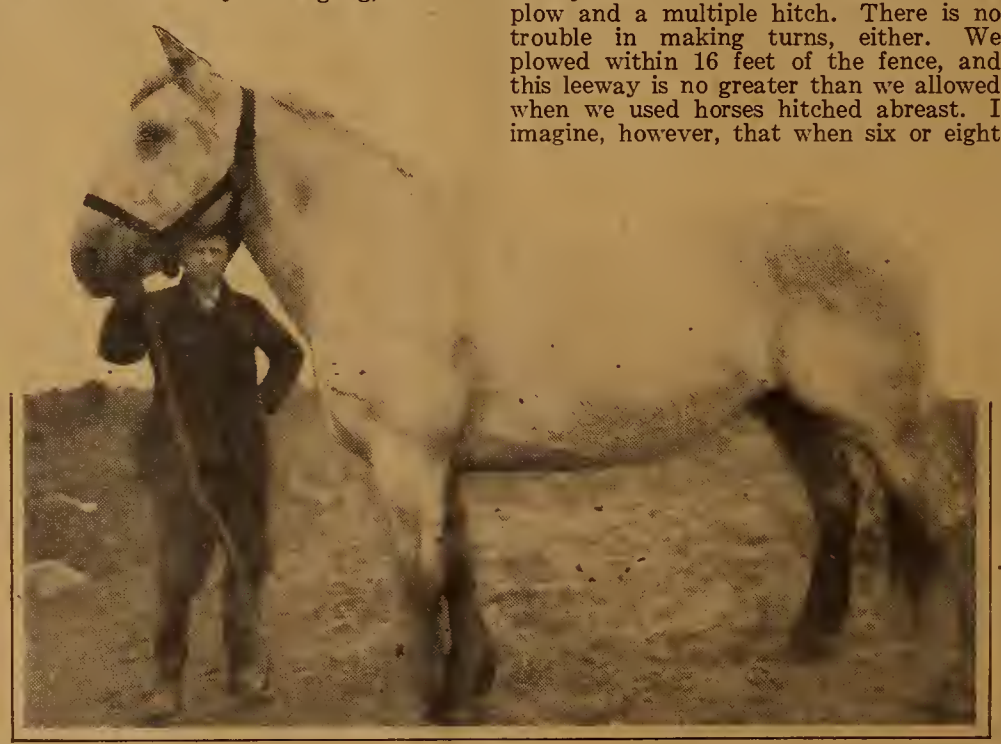
Side bones are often caused by horses tramping on each other when turning, and with high-priced animals like I have it is quite a relief to know there is not a possibility of their being injured in this manner. For that matter, it does not do any horse good to have side bones, even if he is a cheap animal.

The removal of side draft makes the pull lighter, and this, I believe, is one of the reasons for the absence of sore shoulders. Pulling two plows through the black soil of the corn-belt farms is no easy jo for any four horses, no matter how strong This is the reason I say lighter horses ca be used.

Another advantage of the hitch which I failed to mention is that it is easier on mares in foal. There is less chance of injuring the fetus on the multiple hitch, because the horses do not bump each other.

I asked the hired man how he liked working the horses with the hitch, and he declared he was well pleased. He said it was the finest way he had ever driven horses, being as easy to plow as to drive a team of family horses.

Perhaps next year I will try the six-horse hitch, but for the present I will be content with the four-horse attachment. I have a lot of plowing to do each year, because all but 110 acres of the 600 are under cultivation.



Grossboll standing by one of the mares he used with the hitch

Farmers I Know

[CONTINUED FROM PAGE 7]

purposes; that the machines are used with or without the trailers; and that the trailers may be left for loading or unloading while the truck is delivering its own load or the automobile is used for business trips or any other purpose. The cost of a trailer is only a fraction of that of a truck of equal capacity, and operating and overhead expenses are almost negligible, comparing approximately with that of a wagon exclusive of the horses.

The trailer idea is important, when you consider these facts:

The United States Department of Agriculture investigations determined last year that the average cost of hauling corn to market or shipping point by team was 33 cents a ton for each mile, and of hauling wheat was 30 cents a ton mile. The average length of haul was nine miles. This shows that the cost of hauling these products to market averages a little more than eight cents a bushel. The same report shows that when the hauling is done with motor trucks, under proper conditions, the cost is only 15 cents a ton mile, and the average length of haul is 11½ miles.

On this basis the cost is less than five cents a bushel, although the distance is more than one quarter longer. So the farmer with the truck saves more than three cents on each bushel, and also has the advantage of somewhat cheaper land farther from the railroad station. These costs, it should be borne in mind, include all items of haulage expense, such as feed or fuel, care, driver's time, repairs or shoeing, interest on investment, depreciation, and the like.

A one-ton truck with a semi-trailer will haul two to three tons at a trip, or a two-ton truck with a four-wheel trailer will haul four tons. Thus the capacity of the truck is doubled while the expense of operation due to increased gasoline and oil consumption, tire wear, etc., is increased only 15 to 20 per cent. So, by the use of trailers with trucks the loads carried on the trailers are hauled at a saving of 80 to 85 per cent. The cost, therefore, of hauling corn or wheat 11½ miles by this means will average only about three cents a bushel as against eight cents by team and five cents by motor truck alone.

What a Farm Engineer Really is— And How He Can Help You

By Frederick W. Ives



Here is a sample of the type of barn the farm engineer has developed. A balloon-braced frame, stanch and sturdy, with minimum timbering and open center

FARM AND FIRESIDE recently employed me as a corresponding editor to answer your questions about problems you find on your own farm, concerning which you uld like to have the advice of a farm gineer.

It has occurred to me that, because the gineer is a comparative newcomer in the m field, you might like to have me out- e the things in which he can help you. vill try to do that in this article.

A farm engineer is one who uses his en- eering skill for the benefit of better iculture. Our ordinary idea of an gineer is a vision of the man seated in a omotive cab or operating the tractor, ction engine, or power plant. Engi- ering in its broader sense is the applica- n of mathematical science and common se to your problems of everyday life. is does not imply that an engineer need a graduate of a technical school.

You are only beginning to learn of the m engineer, although he has been work- for you for a number of years. The il engineer and the mechanical engineer d the electrical engineer have done much developing industry and commerce ough improved roads, railroads, machin- , drainage and irrigation projects, power tallation and equipment, which in both irect and indirect way have improved the ence of farming. The more intimate ap- cation and improvement rests largely with farm engineer, who has specialized in the plication of other branches of engineering the work of the farm.

The field of the agricultural engineer w covers the following lines pertaining nost exclusively to farm industries: ainage and irrigation, farm power, field chinery, roads, farm buildings, concrete nstruction, sanitary and domestic engi- ering. The latter includes household ter supply and sewage disposal, and the dy of mechanical appliances to lighten usehold labor.

Tile drainage is one of the most profita- and important steps in soil improve- nt. It is not universally necessary of urse, but the number of farms not need- some drainage is comparatively small. nearly every county in our Eastern and idwestern States there are areas badly need of drainage, and generally made up portions of several farms. Taken by elf, one of these farms would make a fficult problem in drainage, since no out- can be conveniently reached without ossing land belonging to a neighbor. Lack co-operation is a more serious obstacle an money. A line fence is not to be mpared with a drainage ditch as a source neighborhood trouble. The amount of nefit derived and the cost of mainte- nce are bones of contention frequently eventing the completion of a drainage oject.

Co-operation and a comprehensive scheme id out by an engineer of experience will ten add many acres of tillable land to ch of the farms concerned, at a cost ually much less than the hit-or-miss heme so often followed by the individual rmer.

As a practical example take the case of me half-dozen Wisconsin farmers, who, ther than employ an engineer for one y to lay out their main outlet, laid it t themselves. The result of the whole scheme ruined about 100 acres of what would have been choice farming land; for, strange to say, not only did the water refuse to run up-hill, but more ran into the low ground than ever before! These men are so skeptical because of the expense and failure of their scheme that now they cannot be persuaded really to drain their land, fearing to throw good money after bad. The fee of the engineer would not have exceeded the value of one of the lost acres.

The improvement of our farm implements and machinery has been largely due to scientific observation of work actually done in the field. The weak and unsatisfactory parts are noted in these field tests, and subsequent improvements made until now most of our field machinery is becoming standardized along certain definite lines. Better material, better bearings, the protection of bearings from grit and dust, interchangeable parts—all are the result of the work of trained observers. Not only is the manufacturer interested—our agricultural colleges are teaching all students some of the principles involved, so that when they return to the farm they may insist on suitable tools correctly constructed. This phase of work developed in departments of agricultural engineering in our agricultural colleges has done much to force a certain class of manufacturers to build machines for use rather than for sale.

The tractor has also played an important part in improving farm machinery, because the light implements designed to be drawn by horses could not stand the strain imposed by the powerful tractor engine. The tractor stands forth in large measure as an achievement of the agricultural engineer. Although the tractor is an evolution of the automobile and truck, it remained for the agricultural engineer to test it in the field, point out its imperfections, and suggest means of improvement. Competitive tests carried out on the brake and in the field have pointed the way to many improvements in the tractor, increasing its durability and its service.

The American Society of Agricultural Engineers, through its tractor-testing and rating committee, has formulated a set of rules for the testing of tractors so that uniform results are obtained. From these the farmer may deduct fair comparisons of those tractors whose makers are willing to submit to actual rigid tests.

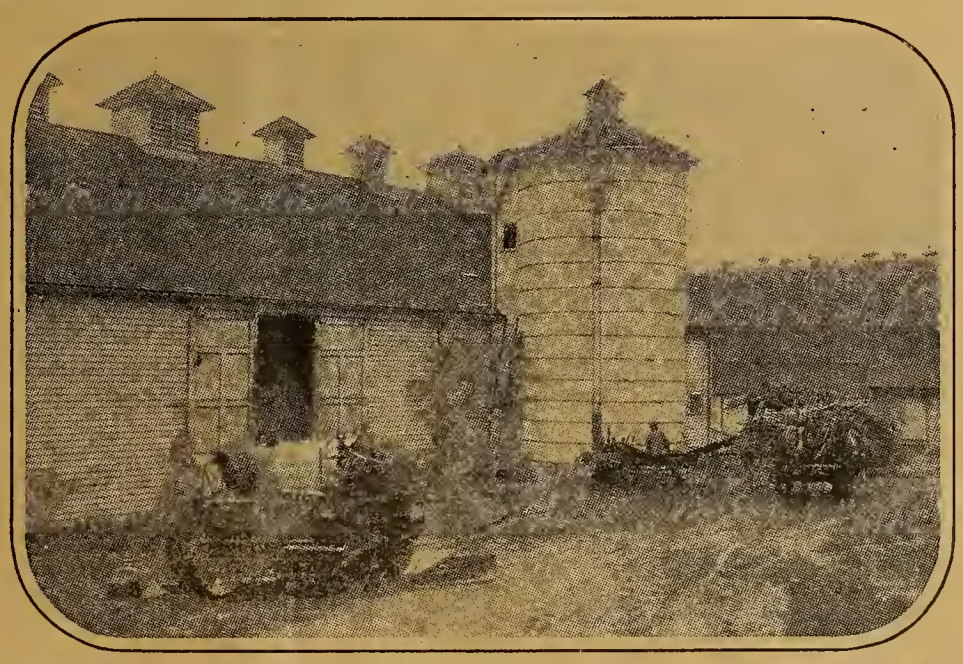
The agricultural engineer is largely responsible for the improved types of barn frames now coming into general use. These frames are known as the balloon-braced and the plank-truss frame, desirable because of their open mow space, convenience of arrangement, economy of material, and saving of labor. These frames have been standardized, and may be built in units, allowing enlargement of the structure at any time without costly alteration or special framing.

The general type of farm architecture has shown marked improvement during the last few years, particularly in the interior arrangement of farm homes, in the beautification of the grounds, in the grouping of the buildings, and general sanitation.

Concrete has had a great deal to do with better sanitation. It is a very adaptable material, being used for all sorts of structures, from smokehouses to fenceposts, from manure pits to well platforms. When properly made its permanent character gives a feeling of repose and solidity to the farm group. Through the use of concrete and tile, or their combination, slow-burning or fireproof construction is made as possible on the smallest farm as in the largest city.

Planning ahead of time is one of the biggest factors in any undertaking—building no exception. It is much easier to move a wall partition on paper than to move the same in terms of wood, brick, or stone. The farm architect who understands farm conditions, and is in genuine sympathy with the farmer, can offer much in the way of service. Any building worth building at all is worthy of carefully drawn plans. The plans help one to visualize the structure before it is built. They aid in making estimates of cost, forestalling the bitter experience of those who build and pay afterward. Then, too, you are likely to build but once in a lifetime, having the experience but once. The architect with his training and his numerous experiences can point out many little devices for saving steps and labor as well as material and money. The extra satisfaction in a well-planned structure alone would pay the modest fee of the architect.

Living conditions in farming communities may now be on a par with the best the city can offer, with the additional advantage of living in the country. The development of the small independent water-supply outfit, the septic-tank method of sewage disposal, and the isolated electric lighting plant have worked wonders in making available many home comforts heretofore obtainable only in the city. These conveniences affect not only the comfort of the immediate family—they gradually extend and raise the standard of living of the whole community.



With the right machinery you can put up your own silage at the right time, thanks to modern methods. Here you see a picture of a 10-20 tractor, burning gasoline, operating a 13-inch ensilage cutter, on the Kingwood farm at Willoughby, Ohio

Running water in the home is perhaps the greatest single labor saver. A dozen different methods of installation, from the simplest to the most complex, from the cheapest to the most expensive, are possible through the application of hydraulic engineering to the problem involved. The elevated tank, the hydraulic ram, the air-pressure tank, the pneumatic pump, and many other devices may be employed. The field of the engineer is that of advising which method is most effective with a given set of conditions.

Perhaps a spring on a hillside has sufficient fall so that it may be conducted into the house by pipes. The size of the pipe must be determined by the amount of flow and the distance traveled. Frequently it is found that too small a pipe is used, so that the water merely trickles instead of running a full stream. The remedy is a larger pipe. Correct installation at the outset, with the assurance of a good supply, is worth considerable trouble. An engineer can determine this in a few hours' time, give complete directions, and insure satisfaction.

The water from the roof of a large barn is usually sufficient to furnish the house and a number of head of live stock with water without pumping. Tanks or cisterns built in the driveway or on top of the ground store the water over periods of drought. If the slope of the ground is right, no pumping is necessary if the tank has only a slight elevation. The capacity of the cistern should be sufficient to take care of all the water falling on the roof.

Naturally, the roof area and the normal rainfall are the two factors which determine the size of the cistern. These are but a few of the problems that fall to the province of the engineer.

Likewise, in septic disposal of sewage there is the problem of the habits and size of the family, the source, proximity, and amount of water supply, and the character of the soil composing the disposal area. This sewage disposal problem cannot be worked offhand by rule, but requires the judgment of an experienced engineer for its solution. Some sewage-disposal schemes are worse than worthless. They may become a menace to the whole community, prolific incubators for neighborhood contagion.

Farm lighting is fast reaching a stage of development where little fear of failure may be felt. Lighting plants are becoming standardized as to rating and operation. Electric plants seem to predominate the field. Safety and ease of operation are the ends sought by the men interested in perfecting these plants. Much of the best engineering talent of the country is engaged right now in this work.

One might go on indefinitely enumerating the devices and equipment yielding comfort and convenience. Suffice it to say that if this is not the age of the engineer, at least he is playing an important part in making life on the farm more enjoyable, increasing the productivity of the farm, and at the same time reducing the hand labor indoors and out.

The farm engineer has been called to fill a definite need in agriculture. He is not simply a parasite who adds to the expense of farming without producing anything. His work is as definite as the work of the specialist in any line of work. He can help production by making more efficient the machinery of production, and at the same time he can add to your profits by doing so, if you choose to avail yourself of his services. The day is past when any farmer can know all there is to know of the business and science of farming. It is a day of specialists, and the farm engineer is trained to do the things well that you have only occasional use for, but which are of paramount importance.

So don't get scared at his title and shy away from the farm engineer, because he may be able to render you services which will add greatly to your profits.

Thinking of Building?

IF YOU are thinking of building a new barn or putting in a sewage system or electric lights, you might get some useful advise from our Farm Engineer which may save you money and trouble. He is glad to help farmers solve their engineering problems, and answers many questions every month pertaining to farm mechanics. It doesn't matter whether it is drainage, house-heating, or farm machinery, Frederick W. Ives is always glad to give the benefit of his years of experience in this field. State your problems in full, and wherever possible give diagrams. Address Frederick W. Ives, 381 Fourth Avenue, New York City. THE EDITOR.

Dream Your Dreams—They Are the Stuff the World is Made Of

By Joseph E. Wing

Illustration by Otto Schmidt

I KNOW the heart of the young man, perhaps I can imagine the heart of the young woman, and I do not know at all the hearts of the old. Sometimes, indeed, I question whether there be such a thing as old age, for I see when I look in the glass that my hair is gray and there are lines in my face like those on the face of men who appear old to me, and yet I know well that I am not old, that I was never younger than to-day, that indeed I have been much older than I am today.

I wish to talk to the young man and the young woman who dreams. Not the dreams of sleep do I mean, though sometimes the spirit loosed from the body is wiser in sleep than in waking hours, and sometimes the real self stands displayed in dreams so that one may guess what he was meant to be, as he recalls his dreams of slumber. But the dreams I wish to speak of to-day are our waking dreams.

The world is built of dreams. Dreams are the soul of hard, stern, material things. The giant steamship gliding majestically through the green waves was first of all a dream. The railway train thundering through the valleys is but the embodiment in steel and wood of the dreams of many men. The rude log hut of the pioneer is a dream, first of all, and the beautiful temple with column and arch and glorious but simple lines of life and sweep, so beautiful that it makes all men better only to view it, was first of all a dream in some man's brain, an inspiration proceeding from some dreaming man's soul.

More, human life comes from dreams. The man with noble character began his work of character building by dreaming dreams, dreams in which he saw himself strong, honest, gentle, brave. All achievement that is high and noble and worthy is the realization of dreams. Dreams are the best things that come to anyone.

The little child lies on its back in the tall grass and dreams day dreams, filled with strange fancies, peopled with curious beings, some of them truer than he imagines; the youth dreams, but not of things afar off, he dreams of his future life, of his work, of his hopes, of his achievements; dreams of his sweetheart and fondly pictures to himself the day when she will recognize in him enough of strength, enough of beauty of character so that she will look upon him with favor; dreams of things that he will accomplish some day, some honor, some fame, much love, a home among men. Sometimes he dreams vaguely, as one in a mist, not realizing that dreams come true, not believing that these beautiful pictures that come to him in dreams can come true.

Let us look deeply into the heart of this boy: He dreams of honors, of ease, of luxury, yes, and he dreams of other things. There come days when it is dimly revealed to him that nobility of soul comes through voluntary renunciation, through sorrow and pain, that greatness comes through service. He thinks: "Oh, I would be willing to suffer anything if it would give me this glorious strength and fortitude and nobility of soul, so that at last my friends would speak of me tenderly and reverently, with hushed voices."

But the boy awakens from his dream, or is rudely awakened, and bid get ready for school and to be sure to wash his face.

And the girl? Of what does she dream? I think that she desires to be beautiful so that her friends would be glad to look upon her face and find it fair. I think she that dreams of being loved, of some brave knight who shall be so strong, so brave, so gentle and good, and who shall love her so tenderly and her alone, cleaving unto her and forsaking all others—yes, and she too dreams of service. To her it seems the finest thing if she may be permitted to bind up the wounds of the suffering ones, to give smiles and kind words where smiles and kind words are divine rays of sunlight to heal and strengthen the wounded soul.

The young man thinks it would be a glorious thing to lay his body down fighting bravely and fearlessly for the right, the young woman, being a little nearer the soul of the Almighty, wishes to devote her sweet, pure spirit to comforting and strengthening mankind. So the dreams run parallel, according to the different natures of men and women. The young man, glorying in his physical manhood, thinks it is the noblest sacrifice. The young woman, with a frailer body and more of love in her, thinks of sacrificing that of her that is most precious. They dream, and confess it not! Maybe you think your dreams foolish, and would be ashamed to confess them; maybe you are chided for idleness, for indulging in fits of reverie when you might be digging potatoes or washing dishes.

My girl, my boy, there is no better thing in the world than this dream of yours, and no more real or true a thing than these dreams. Let the dream be high and noble, persist in it, dream it over and over. Take the best and highest conception of life that you can dream, make it a rule of life with you. Start on the pathway that the dream points out. You may be setting out for a mountain top, you will begin to climb slowly, and the path, the climbing, may be a bit hard, you may slip and stumble and seem to lose all that you have gained, but if once you have trod the path, even though you slip and lose footing, be sure it will be the more easily regained for your having trodden the path once before.

As you go on, the view broadens, you are amazed as you look back and see how different the lower country looks now that you are above it, how fine and pure and spiritual the air is as you climb. A new strength comes as you climb, new resolve, new courage! You may be astonished, though, after starting on the path that you thought led up the mountain to find that it diverges, that it leads you to some other summit that you had not seen at all. Sorrow not for that, but be glad that you were ever led to climb at all.

Be not dismayed when you start on your journey of life if your friends decline to go with you, if they ridicule you for setting out, if they counsel you not to go at all. No man can lead aright his fellow man The inward promptings of your own soul will tell you what is your best work. Do that work. Do that work no matter if your neighbors laugh and your best friends are grieved or ashamed of you at first. You must leave them when you set out upon this journey, they cannot follow you they will not understand, at first. It is when you have come down from the mountain and brought to them some of the rare flowers that you have gathered up there that they will begin to believe that there exists any mountain at all.

But there are dreams, and dreams. Only the highest ones are worth following. Emerson advises you to hitch your wagon to a star. You can't do better. Within every soul there are days when the tide of life runs high. There are days when one has high courage, when he feels that he has strength for any task, when his dreams lead him to look afar and his vision is keen to see the highest peaks. Trust those days. They are the right days on which to set out to seek fortune. Get clear in your mind on that glorious day the vision, see then the way to the mountain top.

Set out then, resolutely, and at once, on the way. That high flood tide in your life can't always keep you up. To-morrow, as you trudge along the trail, you may be weary, the sky may be overcast, the mountain top no longer in view. You will feel weary and dispirited. Maybe the fog will come down and shut you in, you will find the utter loneliness that comes at times to the despair of every human soul. The way is hidden that seemed so plain yesterday, and flocks of evil birds, seeking carrion, caw hoarsely to you from the sky. They cry out: "There is no God, there is no God, only he who fills his belly and puts on fine apparel and remains in comfort on the plain is wise, there is naught but toil and sorrow and suffering on the way up which you travel."

Evil days of blackness and despair All of us who have traveled far have found them, and sometimes we have turned back in discouragement and confessed to our scoffing friends with shame that we found nothing on the mountain worth seeking. And again, remembering the first true vision, we have set out again with renewed hope, and, from habit, after a while have learned to keep on daring the dark days, and have come at last on that mountain top where we have found things that we may speak of to no man, only bid him come up and see for himself.

"The earth shall yet surrender to him who marches on, though the promised land proved to be but a mirage and the day of deliverance was canceled. The gods shall yet anoint him, and the morning stars shall sing.

"Give me that toiler's joy who has seen the sunlight burst on the distant turrets in the land of his desire.

"I may never take you farther than I have been myself, but you may pass on when I tell you of the vision that I myself beheld.

"You may never fashion from the being that I have wrought, but you can take your reckoning from the rare design where my clumsy hands fell short."

To the young man, to the young woman I say, dream all you will, and let the dreams be of the highest possible things Know this, that any conception of nobility of soul that your dream pictures for you you may reach. You can't dream of a splendor of soul for yourself that you cannot in the end attain. The way may be long. You may not, you cannot, *all* the time live that high ideal, but hold it before your eyes, believe in it, climb toward it, press onward, ever, and in the end it will become a part of yourself.

Make the dreams come true. Bind them upon your heart, believe that these dreams are the most real and sacred things on earth. Breathe them to no man unless you are sure that you have found the friend who will understand: just brood over them and absorb them and make them a part of you. Some of the dreams won't abide, there is [CONTINUED ON PAGE 27]



"But There Are Dreams—and Dreams"

THE only suggestion we would add to what that good and beloved farmer Joe Wing says here, is that the man or woman who gets farthest is the one who dreams to purpose regarding his own affairs.

The dream of the farming man can well take the avenues leading to the development and improvement of his own farm, his own home, his own marketing methods, his own scheme of management, his own family's happiness.

Just as the railroad and the steamship Joe Wing speaks of were once dreams in some man's mind, so also were many of the present-day time and labor saving devices and machines which you use. The gas engine which runs the tractor, the truck, the separator, the woodcutter, the water system, and the electric light system is itself some man's dream come true. Even the things which the engine runs are themselves dreams come true.

Dreams come true to those of us who bring them true by study and work.

THE EDITOR.

There Are Good Dogs and Bad Dogs—Which Kind is Yours?

By Warren H. Miller

THE first point to consider in getting a dog for your farm is to get a *manly* dog. It is hard to forgive cowardice in either man or beast.

There are plenty of breeds of dogs that make most lovable and affectionate pets, and yet possess a certain sturdiness and dependableness that can be relied upon to come to the fore with do-or-die courage when an emergency arises. A dog that will not chase off tramps, hunt down the sheep-killing mongrel, or fight off foxes and other vermin is not worth having about the farm.

Have two dogs if you can. One dog alone sometimes is more troublesome than if he has a companion to play with.

For a dog to be really a satisfactory part of the farm family, he is essential to start with a puppy. Then is the time to head off tendencies to bark at and chase passing vehicles, climb up in the house stairs, jump all over one with muddy paws, and otherwise make himself a nuisance. These faults are hard to eradicate when once formed, but are easily nipped in the bud when he is young pup.

In every breed it pays to buy only thoroughbreds. Cross-breeds of all kinds are inevitably throw-backs, in which the wild traits of their remote canine ancestors crop out unfavorably as the dog develops. For this reason the purchase or the acceptance as a gift of a mongrel puppy is a pure gamble. To take over a grown mongrel who has proved that he is smart and affectionate and dependable, as many of them turn out to be, is not so bad for a general farm dog, but no such results can be predicted for the unknown mongrel puppy.

The laws of heredity tell us that, while a thoroughbred puppy may not reproduce any of the traits of his dam or sire, he is sure to reproduce the general family virtues. He may resemble his grandsire or his great-great-granddam, as did Momeney II, the recent setter champion, who came to be known as "The Blazing Soul of Roderigo," for he seemed to be the great Roderigo come back to earth again.

On the other hand, the laws of atavism assure us that a cross-bred or a mongrel will surely throw back toward the original wild dog, having all the inhuman traits of your wild cat or your raccoon pet, and not to be accepted on equal terms with any member of your household as "almost a human being."

This atavism in all mongrels and cross-breds comes out most objectionably in the penchant for running wild at night and killing sheep. When the moon is up, the dog's wild ancestors call to him irresistibly, and urge him to the old wolfish night-running. The thoroughbred has had this tendency bred out of him, and will sleep quietly by the fire or in his kennel, as all honest folks should,—but beware of this same moon on your mongrel pet! Even a straight cross-bred, such as the "dropper," or cross of pointer and setter, will throw back at least two hundred years, as his dropping instinct proves; but your mutske-dog mongrel is quite likely to have Old Man Wolf of 500 B. C. cropping out all over him, and will kill a sheep out of pure wantonness. As no neighborhood will tolerate a sheep killer, by all means let your dog be a thoroughbred and above suspicion.

As to particular breeds especially adapted to farm use, setter, pointer, or coonhound makes a good large farm dog, because he is equally good as a watch dog and will give the younger men on the farm many a good day's hunting in the back country and woodlots around your place. As a choice among house dogs the wire-haired "foxy" is as courageous and smart a little imp as travels on four legs, with none of the snappish traits that characterized his forerunner, the smooth-haired fox terrier. The beagle is always a good all-around small dog, useful for both hunting and keeping an eye on things at night, and the Boston bull terrier, if you are lucky enough to get one that leans more to the terrier than the pug, will be plucky, smart, and as lovable a pet as anyone could wish.



Introducing Bunny in his official capacity as general manager of all the children's games at the home of F. A. Korn, Mountain View, California.

The Airedale is rather large for a house dog, and he requires a good deal of training with real hunting dogs to make him useful as such, but as general farm utility dog he stands up near the top. Smart, courageous, affectionate, and enduring good-naturedly any amount of mauling from the children, his terrible wolf teeth make him able to kill a tramp or dispatch a stray mongrel with ease. A very good choice is he, exceedingly stubborn and trying as a pup, for he does not "find himself" until about thirteen months of age—but a "he-man's dog" for all that.



This good grouse setter is Shenango Don, son of Albert and Queen Zorus. There is no sheep-killing blood here

The collie and the Borzoi have both degenerated to mere bench-show dogs nowadays, unless you get an old-fashioned shepherd dog of the earlier farm type. Larger dogs than these will be a trial to raise. They are apt to prove very short-lived, and one can feed them with a shovel without diminishing the visible appetite in the slightest.

A bird-dog pup of good ancestry will cost about $25, when two months of age. I would select a Llewellyn English setter for quail country, a Laverack English setter for hilly grouse or "partridge" backwoods, and an Irish setter if my shooting is by marsh and fen. A pointer will do well on either grouse or quail. For rabbit shooting the beagle is unexcelled, and for fox, snowshoe rabbit, and coon the coonhound is our old pioneer standby, when we shoot the fox ahead of the dog in the mountain country as is the custom where the country is too hilly for horse and foxhound. "Houn' dawg" pups cost about $15, or even as low as $5 in the backwoods. At from $20 to $40 one gets a wire-haired foxy or bull, and of course all these dogs will cost much less if bought as a pup from some neighbor who has a good litter.

But no matter by what hook or crook the puppy has been annexed, when he arrives he will romp out of his crate, or out of your vest pocket as the case may be, and promptly rule over the entire household. Just why that tiny doglet exhibits such lively affection for all of us strangers around him, and everybody present loves him, is a matter that we humans have never been able to fathom; but love us he does, licking everyone's face, prancing up with frantically wagging, deevil-duyvil of a tail to see each and all of us, until the question whose dog is he, anyway, arrives at once. The one who is to be formally invested with his ownership should now be selected, for he who feeds him will be the puppy's first and foremost friend, and on him will he lavish that doggy adoration which is sure to come with advancing age. Of course he will love all the family, but his affections and obedience will center on that one individual.

This matter settled, the question of housing and food arise immediately. A puppy just weaned requires six meals a day; at four months he will need four meals; at six months, three; and at twelve months, two. When full-grown, one meal a day, at night, should be ample. In the first puppy meal, early in the morning, a little milk should be given, enriched with some good puppy milk powder, or else with condensed, unsweetened cream, for cow's milk is not nourishing enough, and it causes more pot-bellied and rickety puppies than any other thing. The second meal will take place after the family breakfast, and is of table scraps, enriched with a good meat broth. Then, about eleven o'clock, he should have some raw meat shreds on it to play with and on which to develop his teeth. Then, at dinner-time, a good feed of broken-up puppy biscuits, table scraps, and meat broth; at four o'clock, a puppy biscuit; and at six he will bolt the big meal of the day, which should be of table scraps, a puppy biscuit, and a good help of meat from the dog kettle, mixed with scraps of stale bread which have been baked to a golden-brown in the oven.



A Pennsylvania coonhound puppy—as good and as smart a farm dog as you can get, if pure-bred

I usually manage my dog feed by keeping a kettle on the stove with dog meat in it, and save all the scraps of stale bread, which are roasted in the oven and kept in an earthenware crock. This, with a box of puppy biscuit, will give all the food needed, when added to the available run of table leavings. Do not buy butcher's scraps for your dog; they are not nutritious enough, and he will develop worms and eczema from improper feeding. Get, rather, some cheap cut of meat, say a shank bone, a pound of which twice a week will be ample. It costs about 50 cents a week to feed a pup properly, but you will save the cost in veterinary bills, which are quite as expensive as doctor's bills, and medicines, also not cheap—and you will have a fine, healthy puppy as a reward. As he grows up, the middle meals or snacks are omitted, and when full-grown the single meal is all that he should have. The quantity remains about the same all through life, about as much as a plate of food, for a growing puppy will eat as much as a full-grown dog.

The housing question comes next, and arrives with the going down of the sun. The outdoor dog requires a good, wind-tight kennel. This matter is one that is usually sadly bungled, so that the dog dies early from cold in the liver or distemper, when he ought to be sounder and healthier than the house dog because he spends at least the sleeping half of his life out of doors. Most kennels are of the classic design of a small gable house, with a door in the front, a miserable invention, always cold and drafty and full of fleas. I give here the plans of a kennel that I have used for two or three large hunting dogs. For a single one I would prefer a leanto house, roofed and sided with tar paper, and with the dog hole *to one side of the front*. The rest of the front is on hinges, so it can be opened out and the mat taken out and sunned, and the inside scrubbed and defleaed with a spray of creolin. The mat should be 30x40 inches for a large dog, a setter, or a coonhound, which will give you the ground-floor dimensions. If your choice is a bitch, better make it two-storied, with the second story open to the world in front. Here she can lie and watch her puppies without their getting at her for another lunch—for even a canine mother likes to get away from her offspring occasionally.

The height of the first floor need not be over 24 inches—the lower the better, for it will be warmer. Be sure that there are no cracks in either floor, sides, or roof to permit drafts and cause uneasy sleeping. The door to one side of the front will shield him from those sweeping gusts of cold air which waft out all the heat that the dog has given off from his body, for the rest of this side-door kennel forms a sort of pocket which resists the tendency of vagrant winds to scour into it. A little straw, molded nest-wise around the back in winter, will make a warm backing for the dog, who usually sleeps facing the entrance, and at that time the flea nuisance will be negligible. In the summer nothing but the mat should be used, since fleas breed in straw dust. The kennel should be raised off the ground on bricks or posts, as otherwise the bottom boards will soon become damp and unhealthy. The cost of such a kennel, of tongue-and-groove lumber and good rubber roofing, will be about $5. That of the hunting-dog kennel I use, which was highly praised by the "American Field," was $19.50, which is a small enough investment when you consider that it will, if painted, practically last a lifetime, and that it may save you the life of many a valuable beast. Do not consider your dog merely as an ornament or a luxury for the pleasure of the children. If you get a real dog and train him properly, he will pay for his keep time and time again in faithful service and companionship. Do not stint his training, for without it the best of dogs grow into unruly and worthless curs.

Safeguarding the Sheep

THOUSANDS upon thousands of sheep die each year from a great variety of preventable causes. The killer dog is not the chief cause of loss. He may cause perhaps one per cent of the deaths due to accidental causes, but the most serious losses are attributable to ignorance and carelessness upon the part of the owner or his shepherd. Among the chief causes of loss may be mentioned lack of shelter for lambing ewes and their newborn lambs. A sudden snow or rain storm coming at lambing time often finds ewes and lambs exposed, and many deaths result.

Dr. A. S. Alexander.

Come With Me to This Strange Corn Field and Watch Closely

By J. F. Duggar

Corresponding Editor of Farm and Fireside

IT WAS August. A farmer from the West was being shown a Southern corn field which was the pride of its owner. As the visitor gained his first view, only politeness kept him from expressing his impression that if this be a corn field it was one where corn was largely left out, for masses of luxuriant green foliage was more apparent than were corn blades and tassels.

However, on entering the field he saw that there really were rows of corn fully five feet apart, and that corn blades and tassels were present, but entwined by the stems of a coarse vine, of which the slender spirally bent streamers reached out from above the tassel, seeking to embrace any adjacent plant.

This vine was the velvet bean, a semi-tropical, annual legume. On it were borne immense leaves, each consisting of three large leaflets. Great clusters of deep purple blossoms hung like bunches of grapes, mostly hidden by the luxuriant leafage. Walking through this corn field was beset with difficulties, for the velvet-bean vines reached from row to row, and interlaced from corn plant to corn plant.

The thoughts of the visiting stockman turned to the silo as a fitting destination for this wealth of green. But the guide pointed out the difficulty of handling this tangled mass, and promised to show the visitor later a more practicable means of utilizing the entire growth.

And so let us look again into this corn field in November, a few weeks after frost. The farmer has waited to pull the ears of corn until frost has made the task easier by killing the velvet-bean vines. Their foliage has now become browned or blackened, and much of it has fallen. Great clusters of black, velvety pods are everywhere in evidence, some supported high in the air by those cornstalks that are still erect, others barely held above the ground by the cornstalks borne down by the weight of beans.

A full cluster of velvet beans may contain nearly a dozen velvety pods, each about three inches long, so that the breaking off of the entire cluster is an easy matter, which is an important point so far as concerns that part of the crop destined to be fed in the barn in winter or to be saved for seed.

However, it is generally more profitable to let cattle do the harvesting of velvet beans in most of the fields. Indeed, cattle are so fond of the clusters of beans and of the dried and partly fallen leaves of the velvet bean that this plant has come to be the main reliance of Southern stockmen for winter pasturage. Thus the velvet bean is probably the only plant that is preferably grazed after being killed by frost, rather than before. When dry it is more relished than when green.

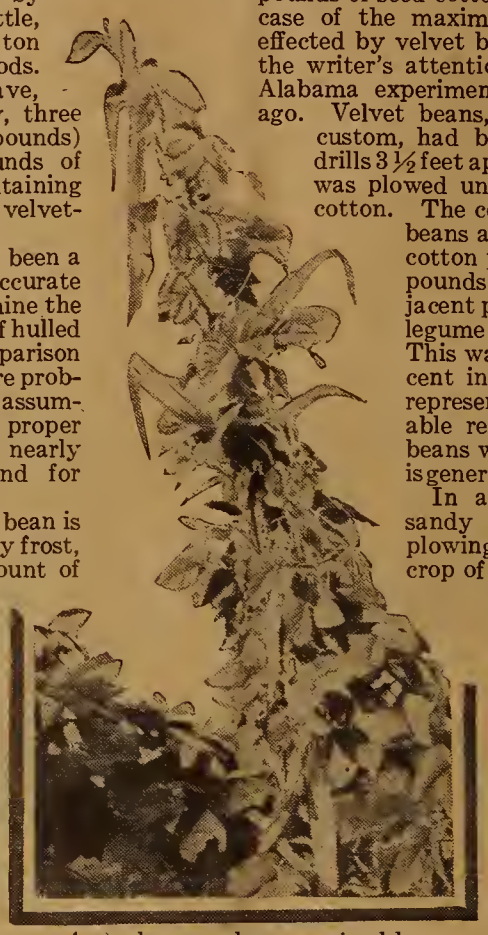
Another reason for postponing the grazing of the velvet beans until after they are dead, rather than grazing them while green, is the greater ease of pulling the ears of corn after Jack Frost has reduced the tangled growth of vines which our visitor found in August.

You will correctly conclude that a growth of velvet beans as luxuriant as here described naturally increases the labor of harvesting corn. Such a growth is generally believed slightly to reduce the yield of corn, but it is evident that such reduction, if any, in the corn crop is counterbalanced many times over by the feeding value of the velvet beans produced.

For example, in a field where the normal yield of corn is 30 bushels per acre we may be able to harvest, say, 27 bushels of corn, and to gather, either by hand or through cattle, about two thirds of a ton of dried velvet-bean pods. In this case we have, against a loss of, say, three bushels of corn (168 pounds) a gain of 1,333 pounds of velvet-bean pods, containing about 900 pounds of velvet-bean seed.

While there has not been a sufficient number of accurate experiments to determine the relative feeding value of hulled velvet beans in comparison with shelled corn, we are probably not far wrong in assuming these two seeds, in proper combinations, to be nearly equal in value, pound for pound.

Although the velvet bean is killed by the first heavy frost, it affords a larger amount of winter pasturage in parts of the South than does any other single plant. Indeed, the possibility of an extensive cattle industry in the sandier part of the Cotton Belt is largely dependent upon the general culture of the velvet bean as catch crop in the corn fields.



A single corn plant entwined by velvet-bean vines

During each of the past two fall seasons thousands of grade beef cattle were shipped into Alabama, Mississippi, and other Southern States from the drought-stricken ranges of Texas. These were successfully, and in most cases profitably, wintered first on the stalk fields where the unpicked velvet beans constituted the principal feed. Later in the winter or early spring there was, in most cases, a short finishing period of dry-lot feeding, usually on a ration made up largely of harvested velvet beans, and including silage whenever practicable. Accounts of very satisfactory profits from these feeding operations are numerous.

It is difficult to determine whether the velvet-bean plant is more important as a winter feed for cattle or as a means of improving the fertility of the soil. Let our Western visitor return in the succeeding June to the field where in the preceding August he witnessed the tangle of velvet-bean vines, and where in December he saw the pods and leaves being eagerly eaten by cattle. In June he finds that the cotton or the corn growing immediately after velvet beans is much more luxuriant than on an adjacent field where the owner failed to plant velvet beans between his corn rows.

The increase in the succeeding crop resulting from the growing of velvet beans is decided, being frequently 5 to 12 bushels of corn per acre, and several hundred pounds of seed cotton. The most extreme case of the maximum soil improvement effected by velvet beans that has come to the writer's attention was attained in an Alabama experiment a number of years ago. Velvet beans, contrary to common custom, had been planted alone, in drills 3½ feet apart. The entire growth was plowed under in preparation for cotton. The cotton following velvet beans afforded a yield of seed cotton per acre greater by 660 pounds per acre than an adjacent plot which had borne no legume in the preceding year. This was an increase of 72 per cent in the cotton crop, and represents an unusually favorable result, for the stand of beans was much thicker than is generally found in corn fields.

In another experiment on sandy land in Alabama the plowing under of a summer crop of velvet beans increased the succeeding crop of oats to the extent of 14 bushels an acre.

In extreme cases where, in experimental plots, velvet beans have been planted alone very thick and permitted to choke out all other vegetation, there has actually been found in the entire growth nitrogen at the rate of more than 150 pounds per acre.

However, it is not unreasonable to expect to find as much as 75 pounds of nitrogen contained in the stalks, foliage, roots, and seed clusters of velvet beans grown on one acre as a catch crop between the corn rows. The exact amount of nitrogen will depend, of course, on the luxuriance of growth, and the thickness of the stand of beans.

On the whole, we are safe in the conclusion that, for conditions on the average Southern farm, legumes are the cheapest source of nitrogen, and that the velvet bean usually affords nitrogen in cheaper form than any other legume.

The statement last made, that the velvet bean constitutes the cheapest legume for soil improvement, is based largely on the fact that this plant, being grown as a catch crop in corn fields, requires only an insignificant amount of extra labor, and on the further fact that the cost of seed per acre is less than with any other legume.

Indeed, until a few years ago, and even now to a less extent, many Southern farmers made the mistake of taking too much advantage of this economy of seed, planting only a few quarts per acre. Now we believe that the best results are obtained from planting a peck or more per acre between the corn rows.

There are many variations or methods in the planting or spacing of velvet beans in corn fields. Probably the most popular one is that arrangement by which corn rows are 5 to 5½ feet apart, with a velvet-bean row in every middle—that is, about 2½ to 2¾ feet from each corn row.

Another method consists in growing two rows of corn and devoting every third row entirely to velvet beans. On the poorest grade of land the cattleman who prizes total amount of feed more than yield of corn is justified in planting velvet beans in and along every row of corn, one or two beans about every three feet.

There are a number of species and varieties of velvet beans. The one most commonly grown is the Early Speckled, also known as the "90-day" and as the "100-day" bean, both of which terms are inaccurate in that they indicate a shorter period between planting and maturity than is actually required.

The variety just mentioned is planted in most parts of the Cotton Belt at any time after frost, and up to about the middle of May with expectation of maturing a crop of seed.

This is a round-podded variety, the pods of which are covered with a dark black fuzz, and the seed of which are roundish and of a mottled gray color. The seed is indistinguishable from that of the late or Florida Speckled, which was the first variety brought into cultivation, and now almost entirely superseded, unless perhaps in parts of Florida.

A new sport is the Bunch velvet bean. It promises to be useful where the running or tangling habits of growth of all other varieties are objectionable.

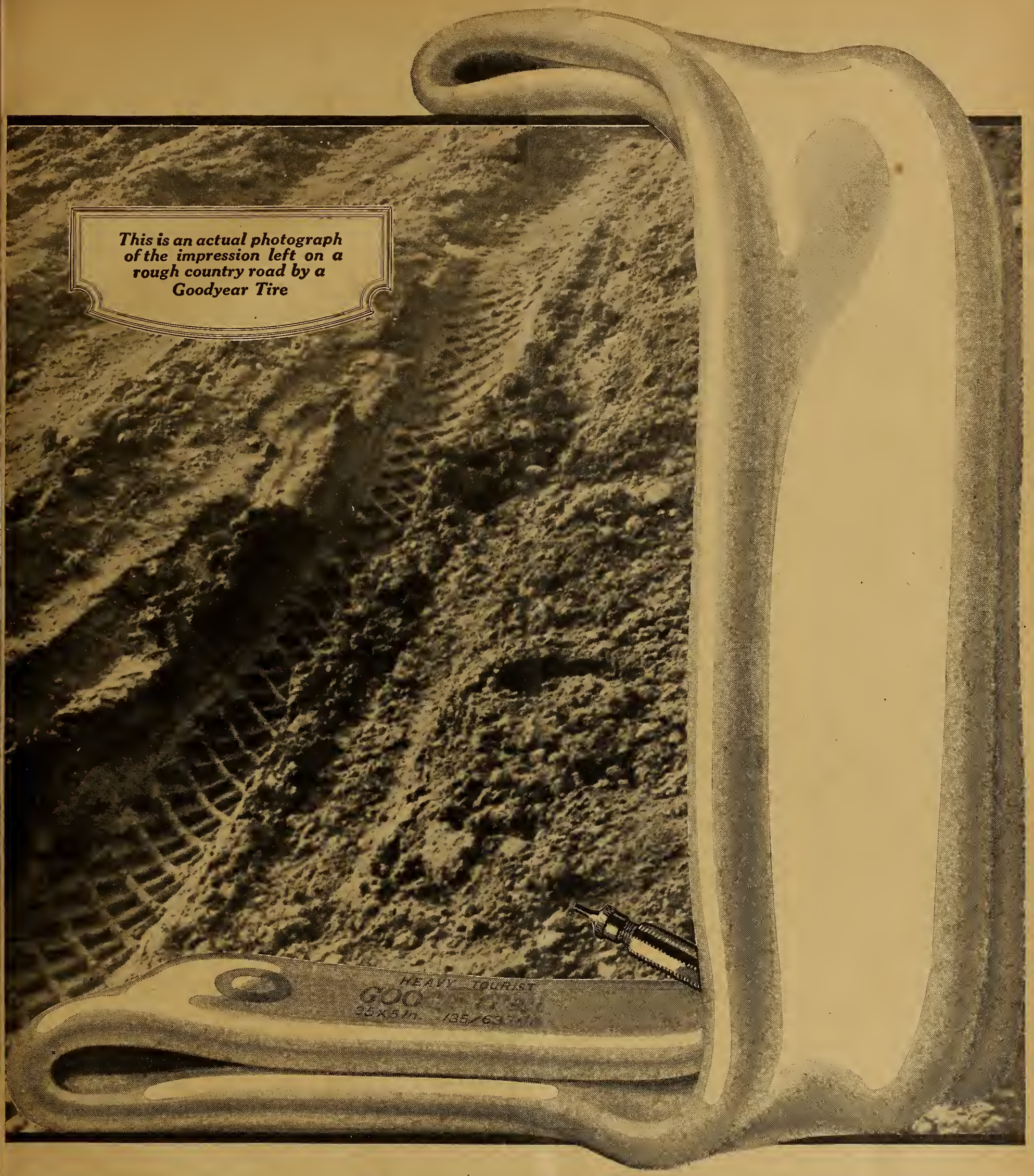
The Osceola is probably the most popular of the flat-podded class of velvet beans.

This hybrid bean is valuable especially because the hairs which are usually found on the pods of most other varieties and give a slight stinging sensation to the hands of those engaged in harvesting the clusters do not produce this disagreeable sensation in the case of the Osceola. It has a flattish pod and flattish gray mottled seeds. It is about as early as the Early Speckled, but has a larger percentage of hulls, hence is less popular with velvet-bean millers.

Among other flat-pod varieties are the very early kind, Yokohama, and the very late species, Lyon and Chinese, both of the latter having large flattish seeds of a dirty whitish color.

Among the soils of the Cotton Belt there is a larger proportion of sandy and sandy loam soils than of any other one class. Such soils are especially suited to velvet beans, which, [CONTINUED ON PAGE 50]





As you picture the large Goodyear-shod car plunging through these ruts, think what punishment was imposed upon the Goodyear Heavy Tourist Tubes. Built up layer-upon-layer of pure gum strips, these thick grey tubes hold air unfailingly and protect the tires which enclose them. More Goodyear Tubes are used than any other kind.

GOODYEAR

AKRON

Wonderful Machines That Talk to Uncle Sam About You

By Harlan Smith



The punching machine which transfers information from the schedules to cards —each hole representing a figure or a code number. The Government will use 550 of them on the agricultural census

A COUPLE of months ago I told you about the census taker who will call at your farm some day in January, and how you would be helping the farm business—your business—by answering his questions carefully.

This time I want to take you with me down to the government census headquarters in Washington and show you how the facts you gave the enumerator will be handled, how the Government will total up your answers and those of the 6,999,999 other American farmers concerning stock, acreage, crops, mortgages, living conditions, children, and what not.

Also, at the end of this article you will find a list of the important questions the enumerator will ask you, so you can look them over in advance.

Now let's look at the machinery:

Down in Washington there's a little machine about three feet high and five feet long that can take a stack of cards with holes punched through them to represent the figures you gave the enumerator, add them—as many as five independent sets of figures of six columns each, from each card—and print the totals of each five sets at the rate of 150 cards a minute. At the same time it counts the cards. The entire operation is automatic, the machine being electrically driven.

This little machine, running at the rate of 150 cards a minute, each card representing some farmer's report, laps up the information on 9,000 cards every hour, 63,000 cards a day, or 19,656,000 a year. That would take a flock of at least 100 clerks a day to do it by hand.

Now multiply the work of this machine by 80; 12,000 cards a minute, 720,000 an hour, 5,040,000 a day, and 1,572,480,000 a year; that gives you the tabulating capacity of Uncle Sam's battery of 80 electrical super-statisticians which stands ready to handle the agricultural census of 1920—the agricultural census alone.

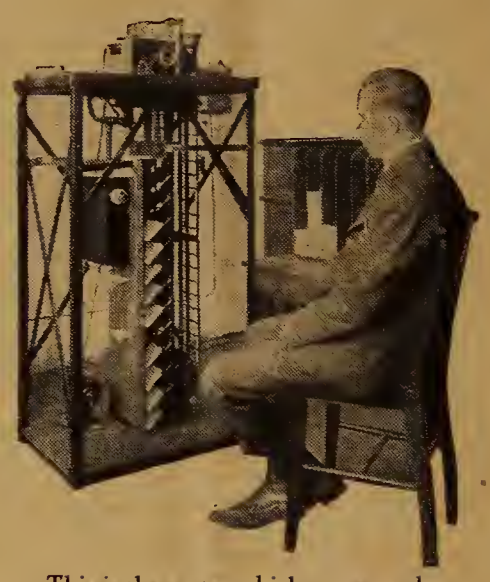
These 80 automatic tabulators are only a part of the new mechanical equipment with which Uncle Sam is going to handle the world's greatest fact-gathering job next year in twelve months—just half the time it required ten years ago.

To punch holes in those cards—a hole for every figure—a small machine about the size of a typewriter, and operated similarly, has been developed. The operator takes the schedule which the enumerator has filled out at your farm, and begins transferring the information in it to a card—or several cards if your farming operations cover a wide range—by punching holes for every answer you gave. For instance, if you reported 125 acres of crop land, she punches a-1, a-2, and a-5 in the subdivision of the card set apart for this item. This punching can be done at the rate of 2,500 cards a day for each machine. It's a big job, so Uncle Sam has provided 550 of these machines—daily capacity, 1,375,000 cards; monthly capacity, 35,750,000.

Then there has to be some way of getting together for tabulation all the cards that report a given item, say the number of bushels of potatoes harvested. A sorting machine does that. It groups the cards according to such classes of information, and it can make a number of classifications all at one time. It does this work at the rate of 250 cards a minute, 15,000 an hour, or 105,000 every government workday. One hundred sorters will be on the job. That means a sorting capacity of 10,500,000 cards a day. The cards thus sorted are ready to run through the tabulating machine. The sorter is also electrically operated and automatic.

These machines are not the product of one brain—a lot of brains contributed parts to their make-up. They had been developed gradually to their present efficiency by commercial concerns. The Government is leasing them from one concern for the agricultural census job—all but the punchers; it buys them. It will cost the Government about $300,000 to lease the machines and buy the cards—about 200,000,000—which remain its property.

Yes, Uncle Sam is all set for the census. Fifty-five thousand enumerators—the people who will call at your farms next January—are on their toes ready for the word "go!" from their 400 district supervisors. A force of 3,500 clerks soon will supplement the mechanical master mathematicians in Washington. Fifteen million copies of the agricultural schedule of questions—about twice the number expected to be returned—have been sent from Washington, and should soon be in the hands of the enumerators. The number of copies printed shows that census officials expect to find 7,500,000 farmers in the United States next January. In 1910 there were 6,361,502, and in 1900, 5,737,372, an increase in 1910 of 624,130.



This is the sorter which prepares the cards for the tabulator. It is automatic, and does its work at the rate of 250 cards a minute. One hundred of these sorters will work for Uncle Sam on the agricultural census

If you don't know what the Government is expecting of you, how it is depending on you to make the census a success, read the digest of the questions to be asked, in the latter part of this article. Then take a pencil and paper and fix up the answers, roughly at least. You'll be ready then for the census taker's visit, and you needn't worry any more about it.

The enumerator who calls on you this time will have 110 fewer questions to ask than last time. The number of possible questions has been reduced from 560 to 450.

The 55,000 enumerators had to be specially trained to take this census of farms. The training consisted mainly of naming the stuff on an imaginary farm. The facts and figures were given in a plain little story which was handed the applicant. He had to take out the information in it and put it in its proper place on a blank schedule.

If the precautions taken to place only responsible, reliable, and competent enumerators in the field counts for anything, we're going to have the most carefully gathered census information ever taken.

The perfect accuracy of the machines I have described will enable the detectives of the Census Bureau to trip up enumerators who make false or inaccurate returns. The average which the machines deduce from millions of answers are so reliable that any wide variation in an answer immediately arouses suspicion. For example, it was discovered during the last census that enumerators in one locality were supplying the same figure in answer to the question regarding the average production of milk cows—a figure probably obtained from an almanac. Apparently they were using it wherever a farmer had not kept records and was in doubt as to the average production on his farm. The figure was so far from the average obtained from other millions of answers to the same question that census officials threw out the almanac figures.

It was on the reliability of averages that detection of the fraudulent returns of the population of St. Joseph, Missouri, was based. The parties responsible for padding the population figures forgot to pad the graveyards. Consequently the death rate in St. Joseph appeared entirely too small when compared with average death rates elsewhere. Investigation of this led to detection of the fraud.

One enumerator some years ago was clever enough to get away with a job for which he could not be prosecuted. A special enumeration of those defective in sight, hearing, and speech—the deaf, dumb, and blind—was being made. This enumerator reported all the babies in his locality—150 of them—as "defective in speech." He got five cents apiece for them—$7.50. He was the only one of some 70,000 enumerators who saw and took that opportunity to beat Uncle Sam. The legal counsel of the Census Bureau decided it could not prosecute the case.

They're a very serious-minded lot of folks over in the Census Bureau, and yet some funny things happen in taking the census. One official told me of a special inquiry made by the Census Bureau some time ago in which inmates of jails and penitentiaries were included. One question asked the reason for the inmate's incarceration and the answer returned in one case was, "Running a blind pig." A young woman clerk in the Census Bureau who was engaged in classifying such replies, came to this one, and not knowing what it meant listed it under the offense, "Cruelty to Animals."



This is the tabulator which consumes the punched cards prepared by the punching machines. This is the machine which will tell Uncle Sam the facts about your farm. Eighty of these tabulators constitute the force to be employed on the agricultural census

Following is the digest of the questions to be asked you by the enumerator. I have gone over the schedule and picked out those questions that may require a little figuring to answer. I haven't included those you probably can answer from memory:

How many years, if any, did you work on a farm for wages? How many years have you been or were you a tenant? How many years have you farmed as an owner? How long have you operated this farm?

Give the total number of acres in this farm, January 1, 1920. (Include all outlying or separate fields, meadows, pastures, woodland, or waste lands owned, rented, or managed and operated as a part of the farm, but do not include land rented to or cropped by any other person than yourself.)

Give the number of acres of improved land in this farm. (Include all land regularly tilled or mowed; land in pastures that has been cleared or tilled; land lying fallow; land in gardens, orchards, vineyards, and nurseries; land occupied by buildings, yards, and barnyards.)

Give the number of acres of woodland in this farm. (Include all farm woodlots, natural or planted, and cut-over land with young growth. Do not include chaparral, mesquite, or woody shrubs.)

Give the number of acres of all other unimproved land in this farm.

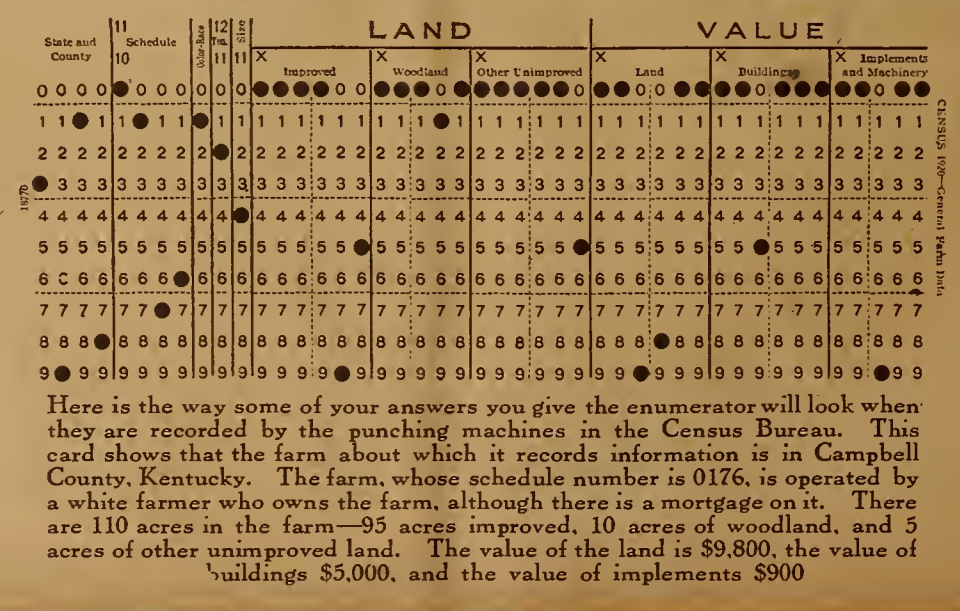
Give total number of acres in grain, corn, hay, or other crops harvested in 1919, including gardens, orchards, and vineyards.

Give acres of land from which no crop was harvested in 1919 because of crop failure; acres of crop land lying idle or fallow in 1919 (do not include any land that is to be reported as pasture under the next question).

Of the woodland reported above how many acres were pastured in 1919? How many acres of land, used only for pasture in 1919, is capable of being plowed and used for crops (without clearing, drainage or irrigation)? Give acres of other land used only for pasture in 1919.

Give the total value of this farm January 1, 1920. (Give the amount for which this farm would sell. Include the land owned, rented, or managed by you, all buildings and improvements, but not implements and machinery.) Give value of all buildings on this farm included above. Give the value of implements and machinery belonging to this farm. (Include all tools, wagons, carriages, harnesses, dairy equipment, cotton gins, threshing machines, apparatus for making cider, grape juice, sugar and syrup, or drying fruits; all engines, motors, tractors, automobiles, motor trucks, and other machinery. Exclude all commercial mills and factories.)

What amount did you spend in 1919 for hay, grain, mill feed, and other products, not raised on this farm, for use as feed for domestic animals [CONTINUED ON PAGE 50]



Here is the way some of your answers you give the enumerator will look when they are recorded by the punching machines in the Census Bureau. This card shows that the farm about which it records information is in Campbell County, Kentucky. The farm, whose schedule number is 0176, is operated by a white farmer who owns the farm, although there is a mortgage on it. There are 110 acres in the farm—95 acres improved, 10 acres of woodland, and 5 acres of other unimproved land. The value of the land is $9,800, the value of buildings $5,000, and the value of implements $900

Why Firestone is Giving Extra Value in Tires

Firestone is giving so much more per dollar this year than the ordinary that our 42,000 dealers want us to tell the public why.

How can Firestone sell the new Standard Oversize Firestone Cord at a normal price?

How can Firestone give the most highly perfected, special molded 3½-inch tire at a price that dealers usually ask for "off brand" kinds?

How can Firestone tubes be sold for less than others of any reputation at all when their very looks and "body" and feel indicate their finer quality and longer mileage?

The answer to all this is Firestone generalship of man power—Firestone organization of brains and capital.

Firestone has built tires since the beginning of motor cars and trucks. Firestone built the first truck tire, and practically all the "firsts" among tire and rim improvements belong to Firestone.

Most Miles *per* Dollar



Plant No. 1. Capacity 20,000 Tires Daily

This vast plant is now concentrated on Cord Tires and Truck Tires. Its efficiency and capacity have been greatly increased by Plant No. 2.

That's because Firestone has thought farther ahead.

So today, Firestone *is* farther ahead than ever. Year by year Firestone has been laying those foundations of man power and resources which are bearing their biggest fruit in low cost mileage today.

It took Firestone man power to create the factories shown here.

It took Firestone man power to foresee the value of a Firestone organization in Singapore, the source of rubber supply, thereby saving you 3 cents a pound on rubber.



Plant No. 2. Capacity 16,000 Tires Daily

Devoted exclusively to 3½-inch Tires. Firestone is first with a huge separate factory and organization specializing entirely on this tire in greatest demand.

It took Firestone man power to control the fabric from cotton field through the mill, and to design looms for special widths of fabric, thus reducing waste and lowering the cost.

And why is this Firestone organization the most effective in the business?

Because Firestone attracts and holds the men who do things.

90% of Firestone workers own stock in the company. Firestone Park is a unique and attractive home community; the clubhouse plays a real part in the daily life of these workers. The Firestone bank has thousands of depositors. The Firestone insurance fund protects every worker in the organization.

All of these are reasons why Firestone can give more in the Cord Tires, or Fabric Tires, or Truck Tires, or Tubes.

Their personal financial interest in you as a customer makes Firestone men save at every turn, to hold you by giving mileage at lowest cost.

Ask your dealer for a Firestone in your size and type.

Firestone

How We Make Our Fruit Pay Us a Good Profit—Cash and Otherwise

By Nelson R. Peet

Secretary Niagara County Farm Bureau

I'VE been a farmer myself, and have had some scheme of co-operation preached at me ever since I was old enough to know the meaning of the word. But it was always preached by someone who had the wrong idea—by someone who was telling how we could beat the market, how we could skin the other fellow.

Up here in Niagara County, New York, we are building a system of co-operative fruit-marketing that has a solid business foundation. For, although our work on central packing houses was started because growers were not making money, the proposition was not pushed as a money-making scheme primarily, but as something that would build up the whole community, make it more prosperous, and put it on a better business basis.

I have been asked many times of what benefit the system is to the individual—if it makes money for him. Well, it did this year, next year it may not—no one can foretell market conditions in any one year—but in the long run it's bound to. It is building the fruit business on a scientific basis—taking out a good deal of the element of speculation. If growers had gone on as they were, sometimes making, sometimes losing, sometimes giving their customers what they wanted, and sometimes disappointing them in the quality of the product, the fruit business in New York would soon have run amuck.

But why let things drift until such a state is reached? Why not co-operate? I believe it good business to organize a co-operative association, provided that by co-operation you can render more service to the public, to your community, and to yourselves.

The idea of central packing houses and co-operative marketing here sprang from the fact that the average yearly labor income for growers whose records we were able to get was only $184. This was the average for the four years 1913-16 inclusive. By "labor income" I mean total farm receipts minus *farm* expenses (not household and personal expenses), minus five per cent on the capital invested during the year, minus unpaid family labor, minus board of hired help boarded in the house. This indicates what the man himself earns.

Such a low labor income doesn't seem so hopeless to a man who already owns his farm. He figures that he is also ahead the interest his capital would be earning if he had it invested elsewhere. But how about the fellow who is buying his farm? He has to pay interest on his investment, and after he does that, $184 is his balance. It takes tall figuring to make $184 stretch over a year.

In March, 1918, we called a meeting of the executive committee of the farm bureau, and at that meeting presented to them the facts that had been gathered in—that is, those records of a $184 labor income. I'll tell you those figures made that committee sit up and take notice. A careful analysis indicated that a large part of the trouble was in marketing.

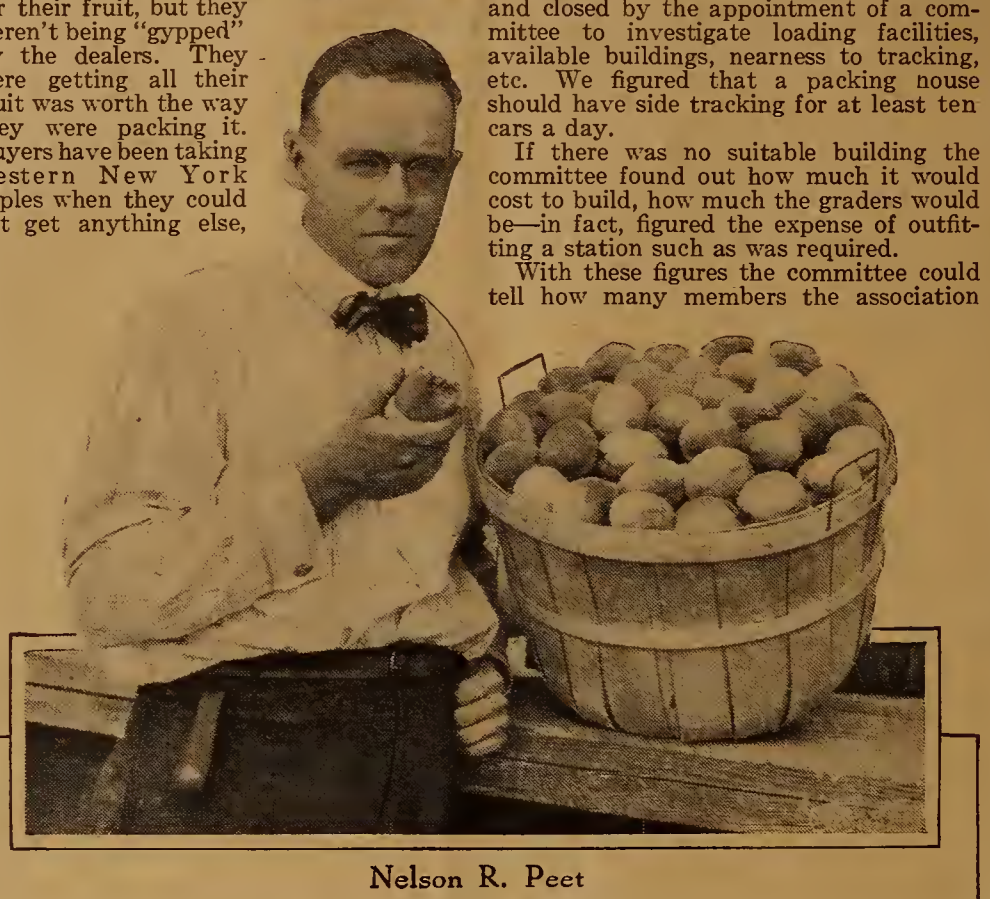
We called in Prof. R. W. Rees, extension professor of pomology at the New York State College of Agriculture. It was his opinion that the answer was centralized packing to secure a uniform grade. Then, systematic distribution of the fruit.

In any plan of co-operative selling the central packing houses had to come first. The growers of a community couldn't sell co-operatively until they had a uniform product. Rules would have to be made and followed so that all fruits would be packed to a standard size and grade.

Why does a man spend months trying to improve his trees? Surely because he wants better fruit. And yet, how inconsistent is his action, when, his trees producing better fruit, he fails to take the finest of that fruit and pack it separately for those of his customers who want it and are willing to pay for it.

A shoemaker doesn't take the whole output of his concern, jumble it all together, and sell to the dealer. He sells the dealer what the dealer wants. Why should we jumble all sizes of cabbages, tomatoes, potatoes, or peaches, or whatever the product may be together? Such a system is criminally wasteful. Under the jumbled pack of peaches it was necessary to buy a bushel to get three pecks of good peaches. Of course, the bushel didn't bring as good a price as it would have done had the purchaser been sure he would get a *bushel* of *good* peaches. And yet the marmalade people are crazy for the poorer grades and can't get them.

The growers weren't getting good prices for their fruit, but they weren't being "gypped" by the dealers. They were getting all their fruit was worth the way they were packing it. Buyers have been taking western New York apples when they could not get anything else, because they didn't know what they were getting when they bought them. They were plainly gambling. What we determined to develop now was a product that would be in demand. We wanted to set a standard that would command the respect and confidence not only of the trade but also of the consuming public.



Nelson R. Peet

This is Mr. Peet

MR. PEET lived up in Monroe County, New York, when a boy, so was raised right in the heart of the fruit-growing country. He was graduated from East High School in Rochester in 1910. That fall he went to the College of Agriculture at Ithaca, New York. When he finished his course there, he went on to a farm in partnership with his father, near Webster. There he grew fruit stocks, renovated the old orchard, and set out new orchards. So, you see, he's been a fruit grower himself, and knows what he's talking about.

Mr. Peet has been farm bureau manager of Niagara County for only three and a half years, but since he has been there the membership of the bureau has jumped from 325 to 1,300. The folks up there seem to like him, don't they?

THE EDITOR.

We invited one influential representative fruit grower from each of the eighteen loading stations in the county to a meeting. When these growers came I explained to them some charts I had made out showing the low labor income of the average grower.

I explained to these eighteen growers the advantages in having centralized packing houses. Under individual packing there were almost as many grades and packs of fruit as there were buyers. Sometimes the buyer wanted the barrels packed with the small fruits in the middle. Sometimes the farmer put one over on the buyer by so packing it.

We tried to point out to these men that by mixing quantity with quality they were losing quality. They were impressed, and went back to their several communities to call meetings of the local growers.

At each local meeting I explained the same charts and brought out the same points I had emphasized in the first meeting. I held no visions of great and immediate increases in income. But I did assure them that if they adopted the plan of central packing houses they would be laying the corner stone of a big business, and that it's a recognized fact the world over that if you give the public what it wants it's going to pay for it and come back for more.

These local meetings all went on record as being in favor of centralized packing, and closed by the appointment of a committee to investigate loading facilities, available buildings, nearness to tracking, etc. We figured that a packing house should have side tracking for at least ten cars a day.

If there was no suitable building the committee found out how much it would cost to build, how much the graders would be—in fact, figured the expense of outfitting a station such as was required.

With these figures the committee could tell how many members the association could have. The committee secured a membership of growers that they thought would work together. They, of course, selected the best fruit growers. They didn't want a company of growers about whom buyers could say, "Oh, they had to organize to sell their fruit."

Now came the problem of financing. They had the plan—knew how much the station would cost, and how many members they could have, so easily found the cost to each member.

The seven associations developed from these meetings were incorporated under the Membership Corporation Law—a non-stock, non-profit law. The moneyed man in our organization has no more to say than the small grower.

This is how the plan worked out: Take, for instance, the Ransomville packing house. That association took in twenty-one members. At a meeting they elected their directors. They then set about financing their project in a way that is worked in the business world every day.

The committee found that $3,300 would build the packing house they wanted. With their twenty-one members that meant a cost of about $157 apiece. Each member gave a demand promissory note for that amount, non-interest bearing, to the association. The directors went to the bank and made a four months' note for $3,300, which bore interest at six per cent, and pinned these twenty-one $157 notes to it as security.

The interest on the note which the association gave to the bank became a packing charge, and was included in the expense of operating. It was a package charge—that is, so much per barrel or bushel packed.

We had a great deal of trouble driving one fact home to these growers; and that is the fact that they have credit. They simply don't realize it. It's a bank's business to lend money, and yet I have seen farmers with good records go in fairly trembling to ask for a loan.

When sales were made in the fall the amount of each individual's note (in the case of Ransomville, $157) was deducted from his sales, and the directors went to the bank, paid the $3,300 note, and received the twenty-one demand notes. These the directors keep, and use at any time the association needs additional credit.

Of course, the grower had to be given a receipt of some sort for his $157 note, so we gave him a certificate of indebtedness—a long-term note. This promise of the association to pay is negotiable, and a grower can take it to the bank, deposit it as collateral, and draw $157 on it.

The directors of each of the seven associations organized hired a superintendent to pack the fruit. The superintendent hires all of the help, and it is charged to the packing house.

When a farmer brings fruit in he is given a receipt crediting him with the number (in the case of apples) of barrels received at the packing house. As his fruit is packed, a card is made out crediting him with the number of barrels of 2¾-inch A grade, the number of 2½-inch A grade, of 2¼-inch A grade, and of culls his fruit packs into. In this way record is kept of each grower's fruit, and the poor grower is not carried on the back of the good one. Each fellow gets his just deserts. And, believe me, it develops the grower.

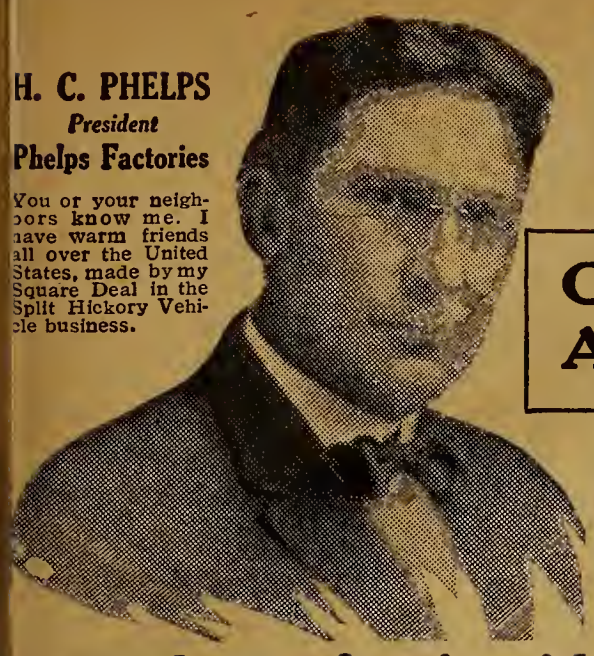
In most of the associations, as soon as a man's fruit is graded it loses its identity and becomes association fruit, and when the selling season is over he is paid for the number of barrels of 2¾ A grade he has credited to him on his card, the number of 2½ A grade, etc. During the season a grower is allowed to draw money for 50 per cent of his fruit.

Each association develops its own selling policy. Most of them hired a sales manager, usually a local dealer, who was familiar with the market, and could dispose of the fruit intelligently. He wasn't given complete authority, but consulted with the growers, told them the conditions of the market, gave his advice, and then received orders from them whether or not to sell. Individual selling by each grower has not worked well with us.

As soon as the seven associations were incorporated, each chose three of their number to form the Niagara District Growers' Co-operative Association. This county association owns the brand, and makes the rules and regulations under which the fruit bearing that brand is to be packed. There is nothing compulsory about this county organization—the associations don't have to join it and don't have to obey its rules, but if they don't they can't use the brand label.

When we decided to organize and erect packing houses, there were already three associations of fruit growers in our county. These all reorganized and came into our central organization. One already had a packing house. One built last year, and the other is building now. Any district that decides to organize for co-operative marketing of their produce will probably have in its midst a few small organizations that can be incorporated in the large one and from which the new central organization can get some valuable hints.

This central organization performs a very important function, as it provides a means for the men to get together on their ideas. They meet here at the farm bureau office, and talk [CONTINUED ON PAGE 27]



H. C. PHELPS
President
Phelps Factories

You or your neighbors know me. I have warm friends all over the United States, made by my Square Deal in the Split Hickory Vehicle business.

No Money Down!

Order From This Advertisement

You can have this magnificent $150 MASTERTONE PHONOGRAPH IN YOUR HOME IN TIME FOR CHRISTMAS, WITHOUT SENDING ME ONE CENT. With the machine I'll send you a selection of fine records to play it with—no money down. You satisfy yourself before you pay ANYTHING. But you will have to send the coupon below, right away, as the Christmas rush for my royal MASTERTONE has already begun.

JUST fill out the coupon. Send no money, no pay of any kind. Back comes this big MASTERTONE with the handsomest art cabinet you ever saw—and six record selections. **If you mail the coupon this week you'll have the MASTERTONE and records before Christmas!** It will make a fine present for your wife, your children—the whole family. You use the phonograph and the records as your own for ten days. Play it for your neighbors—your friends. Take a vote of the whole family on it—and if you don't say it is as fine as any phonograph costing twice as much—if you want to part with it for any reason—I'll take the phonograph and the records back and you won't be out one cent of the purchase price.

Why I Can Make My Low Price to You

Simply because I sell my MASTERTONE to you direct from my factory. By dealing direct with me you get the benefit of all the saving of my sales method. At one small margin above the actual factory cost I put this splendid instrument in your home.

In the last twenty years I have made friends all over America by dealing *personally* with my customers on a direct, straightforward money-saving basis.

I give you a **lifetime guarantee** with my MASTERTONE because I know the workmanship is not surpassed at any price.

Your Choice of Mahogany or Walnut

You have your choice of Walnut or Mahogany satin finish, hand polished; the most beautiful art cabinet you ever saw. My MASTERTONE is built like the finest heirloom furniture. It is in the latest art style and it adds dignity to *any* room. It is at home among the richest furniture. When you see how much finer—how much more impressive—the MASTERTONE is than the commonplace, you will appreciate its real grace and beauty. It has a charm and distinction of appearance that harmonizes with the superior quality of its performance. It is full size—the home size agreed on by the master cabinet builders—48 inches high, 20 inches wide, 23½ inches deep. With record space for 150 records.



One of the World's Three Greatest Phonographs

You Try My MASTERTONE 10 Days in Your Home

Play it with my records or any records. If you want to keep it send me only

$79.50

I want you to send for it on this low price offer **now because the price must soon go up.** You know what conditions are. Labor is scarce and high. Materials are going up. I can not promise to hold my MASTERTONE down to $79.50 much longer. My present stock at that price may last ten days or a few weeks. I cannot tell. Your only assurance is to order from this advertisement *now*. It may be your last chance to get one of the world's three greatest phonographs at a clear saving of $50 to $75 cold cash.

I have letters from delighted owners of my MASTERTONE all over the country. They tell me how *perfectly* it plays all records. They praise its silent, velvety motor—its freedom from the grind of gears. They talk about the wonderful MASTERTONE Reproducer with genuine imported India Mica diaphragm, which gets the **exact shading** of the voices of the famous singers, and the clear, smooth liquid tones of the finest instruments. They compare it with the **other two** greatest phonographs, and they say the MASTERTONE is unequalled.

Now—try it yourself. Remember it is at **my risk.** You do not assume any obligation to keep it unless you are satisfied. Here's the coupon that brings it. Fill it out and mail it today.

H. C. Phelps, President, THE PHELPS FACTORIES
Department 107 COLUMBUS, O.

FILL OUT THIS COUPON TODAY

THE PHELPS FACTORIES, Dept. 107, Columbus, Ohio

Gentlemen: You may send me one MASTERTONE Phonograph in.....finish (you have choice of Walnut or Satin Finish Mahogany) on your ten days' free trial offer. I agree to pay the transportation charges and if after ten days' trial I find it perfectly satisfactory in every respect, I agree to send you $79.50 in full payment within ten days from receipt of Phonograph. It is understood that this does not place me under any obligation to keep the Phonograph. If for any reason I am not satisfied with it and do not want to keep it, I agree to return it at your expense. It is understood that the Phonograph remains your property until I pay for it in full.

Name.....Town.....

State.....St. No. or R. F. D.....

Do you own property? If so give description and name of bank or any one else you desire to give as reference. Give complete description of property and name of references on separate sheet of paper.

Shall we ship by freight or express?.....

NOTE: We recommend that you have Phonograph shipped by express to insure its reaching you promptly.

PLAYS ALL RECORDS
Without Any Special Attachments

Height 48 Inches Width 20 Inches
Depth 23½ Inches

SPECIAL—Write for the MASTERTONE Portfolio whether you order or not. Your name and address on a post card will bring you full description and illustration of the phonograph in colors. I will send you **FREE** my book of Old Favorite Songs—the old-time melodies that everybody loves—50 famous songs—words and music. Write today.



"That They May Rest In Peace"

THE CLARK GRAVE VAULT

NO more beautiful tribute can possibly be paid to our dead than care that their last resting-place shall be secure from water, ghouls and other disturbing elements.

The least and the last we can do for them is to see that they are properly and safely interred. This cannot be accomplished without the use of an air-and water-tight vault. Vaults of brick, stone or cement are too porous to furnish permanent protection. Even steel vaults which depend for sealing upon gaskets of rubber or soft metal, are not positively safe.

The Clark Grave Vault, made from massive plates of Keystone copper-bearing (rust-proof) steel, electrically welded into an air-tight "bell," tested to 5000 lbs. hydraulic pressure, is guaranteed to withstand all conditions for 50 years.

Because of these superiorities of material and construction, the Clark Grave Vault is known to undertakers throughout the country as the QUALITY VAULT—backed by 20 years of satisfaction-giving.

Numberless tests prove that the Clark Grave Vault never fails, even under the most trying conditions. Positive proof in booklet sent on request. Address Dept. *B-7*

The Clark Grave Vault Company

Town and Starling St., Columbus, Ohio

This Clark Grave Vault disinterred at Berlin, Ohio kept velvet casket in perfect condition, although the grave contained much water and mud. Such records are positive proof of Clark Grave Vault superiority over all other methods of burial.



DELICIOUS NEW HONEY 10 pound pails, $2.25, 60 pound can, $12.00. You will find this honey PURE, CLEAN and NICE.
A. A. LYONS, Ft. Collins, Colorado.



INSYDE TYRES Inner Armor for Auto Tires. Double mileage, prevent blow-outs and punctures. Easily applied in any tire. Thousands sold. Details free. Agents wanted. Amer. Accessories Co., Dept. 116, Cincinnati

Champion

Dependable Priming Plugs



Fires Cold Engine

Champion Dependable Priming Plugs are better than priming cups. The gas trickles down the core of the plug and directly over the points where and when the spark jumps. The explosion is instantaneous and sure.

For the hundreds of thousands of automobiles which have no priming cups Champion Dependable Priming Plugs are imperative.

For sale by all auto parts dealers.

Price $1.50 each

Champion Spark Plug Company, Toledo, Ohio

How to Get 100 Per Cent Truck Efficiency

By C. M. Jickling (Michigan)

"WHEN I delivered my milk by wagon last year, it cost me more to get the milk into town than it did to produce the milk," said Henry Wilcox, a farmer living 12 miles west of Detroit. "And now that I am hauling the cans by motor truck, saving time and money, I find that I can afford to spend a minute or two a day in looking over my truck."

Here is an operator with the right idea. He has been making the round trip every morning for the past eight months without the slightest trouble or delay. And he doesn't credit the success of his trips to the superiority of his truck so much as he does to the care he gives it each day.

With him a truck is more than a piece of machinery. It is an investment. He realizes that its earnings depend upon the amount of work it will do for him. That is why he keeps his truck in the best running condition. A year ago Wilcox was acquainted with trucks only through their passing by his farm in ever-increasing numbers His experience with motors was limited to the operation of a one-cylinder stationary engine he used in "buzzing" wood. He had never driven an automobile.

To-day Wilcox is one of the best-posted truck owners in Wayne County. And he has gained his knowledge, not by tearing down the truck, but by studying the literature furnished him by the truck manufacturer. He has observed faithfully the suggestions made by the manufacturer.

One weakness in the sale of motor trucks, years past, was that the salesman contented himself in merely delivering the truck to the farmer. But in this day the efficient truck dealer does not count a sale completed on delivery. It is to his own advantage to see that the owner gets the best out of his truck.

The farmer who neglects to follow the suggestions of the manufacturer and dealer is cutting miles off the life of his truck. And the life of a truck is just as definite as the life of a horse. Abuse and inattention shorten the years of both. No motor truck would survive the present competition unless it was fundamentally right. Manufacturers are doing their best to build sturdy trucks to stand almost unbelievable misuse.

The variance in performance of two similar trucks is not due so much to the lack of uniformity in construction as to the different treatment each receives. The gravest fault in truc operation is continual overloading. Whe a motor truck is rated at 1½-ton capacity its parts are built and arranged to carr that load with a slight allowance for ad ditional weight in emergency hauling.

This "slight allowance" is the source c mischief. The manufacturer provides fo an additional hundred pounds or so; th average operator lets it take care of any where from an extra half-ton to a ton. Over loading places an undue strain on th motor. A laboring engine is subject t virtually the same fatigue as laborin muscles.

Another danger in overloading lies i lack of spring action. When springs ar abnormally depressed, the load practicall rests on the axles of the truck. The jar o the road is transmitted directly to th vital parts.

Most motor trucks are provided wit governors—automatic devices limiting th truck to a rated speed. This speed has bee worked out carefully. The governor i regulated at the factory according to th size of the truck and the tire equipment.

It is attached to the truck for the pro tection of the manufacturer as well as th owner. Overspeeding is just as harmful a overloading. The operator expecting th best service out of his truck will not tampe with the governor controls. Overloadin and overspeeding are sins the intelligen owner is learning to avoid. Time gaine by either practice proves costly.

The experienced driver is content t limit his truck to its ratings. He has foun that with the truck he is replacing four o six horses and the labor necessary for thei care and direction. He saves by conscien tiously staying "within the law." Wh should he try to earn an extra half-hour b pushing his truck beyond practical limits When a man invests $1,000 to $1,500 i a motor truck he should safeguard the in terest on the investment by properly main taining his truck. Consider the experienc of Henry Wilcox. Follow the lubricatio chart faithfully. Keep the brakes correctl adjusted. See tha the rear axle an differential are get ing the proper lubri cation. And, abov all, keep an eye an ear on the moto On the least sign o trouble, investigate



Copyright by Paul Thompson

Why Pershing Changed Horses

IT IS not generally known that every animal which comes over from Europe is held in strict quarantine for 150 days or longer before it is shipped into the interior of the country or used in cities along the seaboard. The reason for this precaution is to preclude all possibility of the introduction of serious diseases, such as the foot-and-mouth disease, which caused such enormous losses a few years ago.



General Pershing heading parade in New York City

So when General Pershing headed the sturdy fighters of the First Division in their parades in New York and Washington, no exception was made, and he had to ride not his favorite steed which bore him in France, but a substitute which was presented to him by admiring New York friends. Likewise, all the other animals of the division, from the humble mules that hauled the ammunition wagons to the horses of Pershing's staff officers, were substitutes for the original horses and mules that moved the division in France.

It might seem to some a bit far fetched to keep out even the mount of the commander of the American Expeditionary Forces, but it is due to such strict quarantine measures as these that our live-stock industry is kept free from the ravages of disease. In Europe they are not so strict, with the result that they are never entirely free from foot-and-mouth and other serious plagues. And it is especially vital now that the meat supply of the world be protected and insured in every way, for it will be many years before the supply of meat animals will be back to normal in the war-stricken countries. A. S. W.

Abundant Winter Water

By J. T. Bartlett (Colorado)

AN EGG is over half water. It is only natural that the heavy-laying hen should consume considerable quantities of this essential yet cheap material. An authentic instance records that a flock of 0 pullets consumed between 7 A. M. and :30 P. M. one February day six gallons of water. At the latter hour the three-gallon fountain was refilled with tepid water, and considerable additional water was consumed before the pullets sought the roost.

This pen of pullets were not loafers, either. Their production for this winter month averaged 62 per cent.

There can be no question that a low winter egg yield is due often to a flock consuming insufficient water, as it is certain to do if the water is ice-cold. Bungling of the water problem in winter is characteristic of indifferent poultry management. Non-freezing fountains, some heated, others not, are obtainable everywhere. Or the ingenious poultry keeper can improvise a special winter water container to suit his needs. One such device is made of a galvanized iron pail fitted into a box, and surrounded with sawdust or other insulating material. As it is sometimes necessary to thaw with hot water, metal containers are preferable to the heavy earthenware types for winter use.

It is always best in cold weather to furnish water with the chill taken off. Any water found in the containers at refilling time should be thrown out.

Want a Better Garden or Orchard?

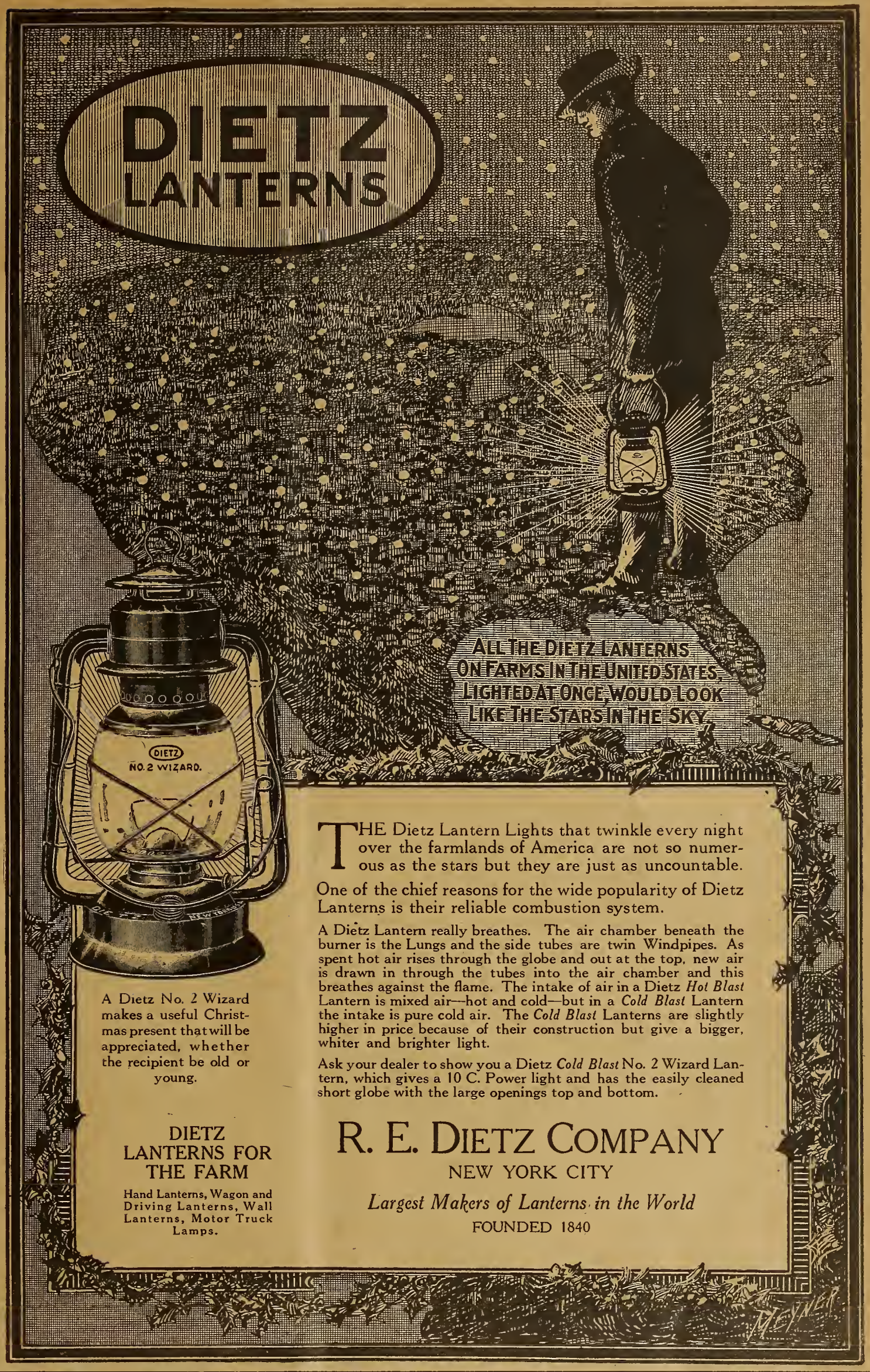
IN PLANNING your new orchard or garden remember that our Horticultural Expert is ready at any time to give you the benefit of his experience. Or maybe you want to do a little beautifying and don't know just the varieties of trees, shrubs, and flowers to plant. Every year there are new insect pests and plant diseases to fight. In any case, F. F. Rockwell, who is a real feet-on-the-ground gardener and orchardist, and a leading authority on all these subjects, will be glad to help. He answers many of these questions every week. Be sure and tell all about your problem, and where possible send diagrams. With insects and diseases, specimens are almost an absolute necessity for identification. Address F. F. Rockwell, 381 Fourth Avenue, New York City. THE EDITOR.

Lime and Phosphorus Make Rich Pasture

By C. M. Baker (Ohio)

TWO years ago we started to build up a permanent pasture in which we wished to make blue grass the prominent grass. Accordingly the field was limed, after being plowed for wheat, and fertilized rather heavily with acid phosphate. Then the grass seed was put on—a combination of six pounds clover, six pounds blue grass, and eight pounds timothy seed to the acre. We found after removing the wheat last year that a good stand of clover was present, and some timothy, but that the blue grass did not show up favorably. The field, however, was pastured, from September 5th on to about November 1st, with young pigs and calves, care being taken to avoid any undue heavy pasturing, so that a heavy coat would be left on the ground for winter. The pasture during the past spring had a large amount of clover and timothy in it, making an excellent pasture.

Now we find that the blue grass is slowly developing, and will evidently take the place of the timothy to a large extent by next spring, and of course the clover will have disappeared by that time, since no seed was put on. We believe that the stand of blue grass now will be sufficient to produce a good blue-grass sod in a few seasons. We feel that we cannot expect to grow blue grass or clover unless we lime properly, and use about 300 pounds of acid phosphate to the acre. We also try to apply manure with the spreader at least once during the season in order to stimulate the growth of the grasses. The application of a large amount of seed per acre seems to prevent the pasture from becoming foul with weeds.









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33x4	9.00	2.50
34x4	9.25	2.60
34x4½	10.75	2.85
35x4½	11.00	2.90
36x4½	11.50	3.00
35x5	12.25	3.20
37x5	12.75	3.35

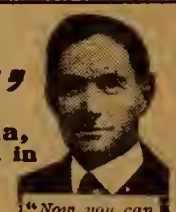
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What Tankage Will Do for Your Pigs

By Thomas J. Delohery (Illinois)

SEVERAL years ago H. D. Greenlee of Wayne County, Iowa, gave considerable thought to his manner of feeding hogs. On one load he marketed the margin of profit was mighty scarce, so he decided to try another method of feeding, and to keep trying until he got one which would make him the best profit.

He finally hit upon corn and tankage out of a self-feeder, and with the hogs on pasture. This is his method now, and he is able to make spring pigs of 225 pounds in seven to eight months. Moreover, this self-feeder enabled him to save a lot of labor in feeding. He filled the feeder when his other work was slack.

"My ration is saving me a lot of money," he said, "not only in the price of production, but it also cuts the labor cost, saves feed, and cuts down the size of the feeding troughs. Every hog gets his fill. There is no regular meal time, and no crowding at the feeding troughs. There is no waste of corn dropping on the ground and being trampled.

"I have my pigs come in April, so that I can put them on clover as soon as they are strong enough. I aim to market my pigs at the age of seven to eight months, depending upon the time they are farrowed. For that reason I push them from the start. The clover and tankage grow the hogs at a small cost, and the corn lays on the fat.

"I never fed tankage until a few years ago, but the results of the first year caused me to make it part of my ration."

Do You Want to Raise Better Crops?

DO YOU want to improve your crop rotation? Or do you want to find a better yielding variety of corn or wheat, or a strain of alfalfa that will do best in your latitude? perhaps you have a new weed or a plant disease that is puzzling you. Whatever it is, FARM AND FIRESIDE is waiting to help you, and if you will put your problem in writing and send it to our Farm Crops Editors they will give you their best thought on the matter. If you live north of the Mason-Dixon line, write to L. E. Call; or if you are in the South, address your inquiry to J. F. Duggar, both at 381 Fourth Avenue, New York City. Be sure and give full details. THE EDITOR.

High Prices—Whose Fault?

[CONTINUED FROM PAGE 5]

New York City. He told me that, although he had lived in this apartment seven years, he knew intimately only two of the thirty-five families in the apartment, and that he actually knew the names of but four of the families. Suppose all these people knew each other, suppose the dwellers in an apartment house here in Washington, or here in one of the Capital City's hideous blocks of row houses, were sufficiently well acquainted to co-operate in purchases, how great might be the saving!

Co-operative buying, coupled with co-operative selling, would go a long way toward reducing the cost of living in so far as food is concerned. I know personally and by observation that the average farmer and truck grower is not growing rich. However many middlemen are, and under present conditions they are necessary.

Getting back, then, to the original proposition, who is responsible, not for the high cost of living, but for this cost being higher than, under the circumstances, it should be? Are not most of us in a position, by a bit of self-denial and much of common sense, to help? Congress can do a little, the Department of Justice can do more, but the people in the cities themselves can do most.

I saw this well illustrated this morning at the Wellington market. An intelligent appearing lady stopped at a stall and asked the price of tomatoes. On being informed that it was 50 cents for a quarter peck, she not only refused to buy but told the dealer that his license should be revoked. Passing on to another stall, she found just as good tomatoes at 20 cents per quarter peck. Is this not a lesson for us all, whether buying tomatoes, shoes, or automobiles?

His Majesty the Hog

Dr. A. S. Alexander

WITH high prices still good in spite of the break from last summer's high mark, aintenance of health more than ever be- re is concerning the farmer. Everything ssible is being done to save each pig oduced and have it grow into "big oney." To this end veterinarians are sy everywhere vaccinating against chol- a and hemorrhagic septicæmia or swine ague, and of late have also been injecting ixed bacterins to prevent or cure mixed fection which has killed thousands of gs. But these are not the sole means by ich diseases of swine may be prevented. nitation is the sane, sensible, necessary easure against disease. Drugs never n succeed alone. Serum therapy must il unless dirt is vanquished, and the en- ronment of hogs everywhere made sani- ry and conducive of health.

External and internal parasites are the ne of the hog business, and dirt largely plains their prevalence. Do away with rt, and parasitic diseases will lessen and entually die out. And with the disap- arance of dirt will go most of the diseases used by the filth germ, sore mouth, skin ease, and bowel trouble. Dirt, too, ves the way for cholera and dysentery.

Mistakes We Make

[CONTINUED FROM PAGE 6]

-laws can subjugate their own plans and shes to those of the parents. There are in- nces: A certain woman with a dependent her married a man whose mother and her were both dependent on him, and all ree lived with the children. The woman s completely invalided, and the men little tter off. All three were intensely childish, t she never quarreled with them or had y trouble.

It is the person who is old enough to be ildish and young enough to want his n way that is the hardest to handle. e woman who handled the three aged rsons is one in a very great number, and e case is cited as showing what *has* been ne, instead of what probably *will* be ne. As far as that is concerned, it is ssible that the woman has done herself injustice, for she has denied herself ny things that she ought to have had.

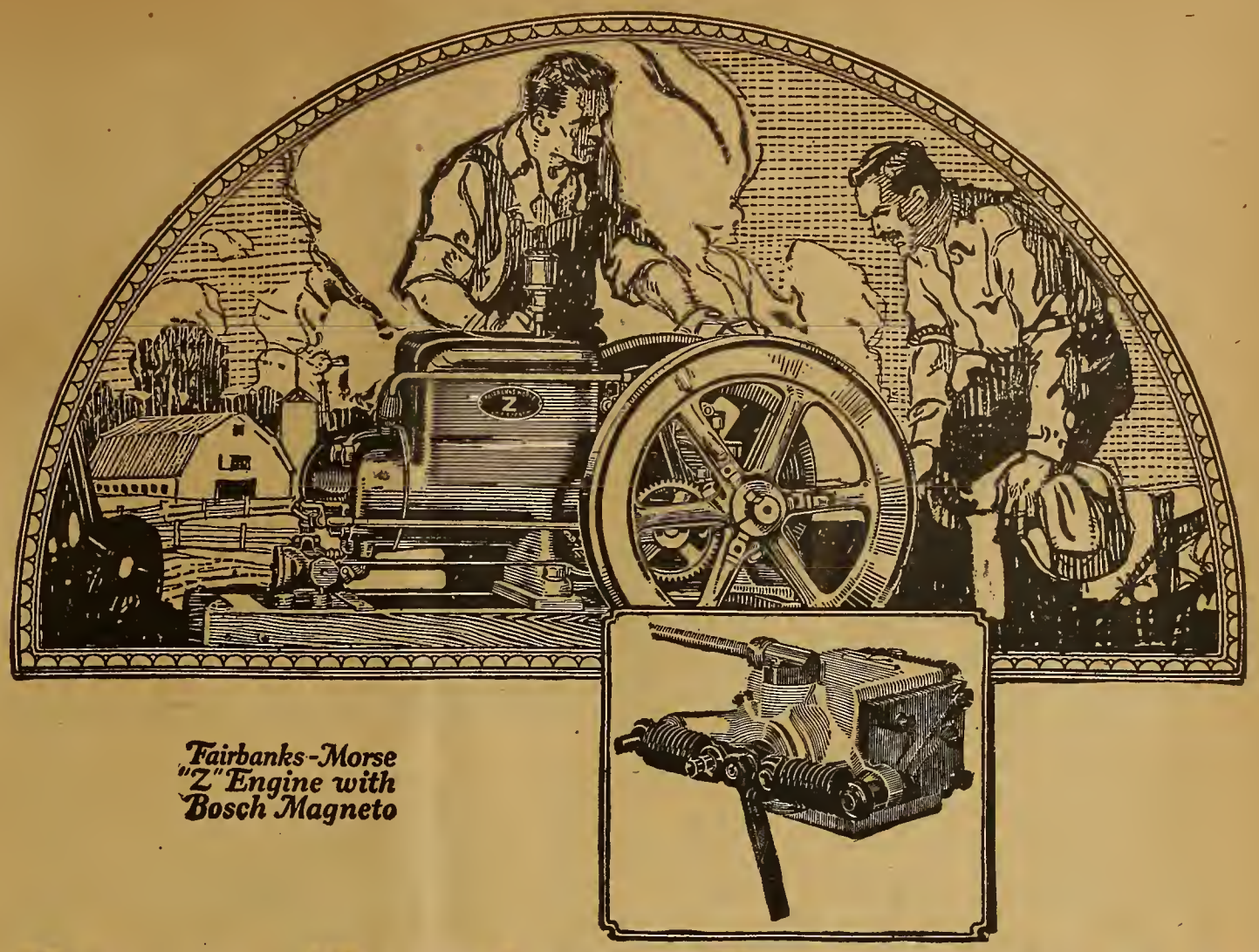
Many young readers will probably think at getting started in the world is the rdest thing to do. But the man with a w remaining years to live and a lifetime habits that unfit him for city life in a easure, and yet wanting to leave the m, has a problem that is hard to solve. e wives of these men have not been entioned thus far, but purposely so. In oving to town they move their business that of keeping house—along with them. the main, they do not suffer as greatly the men. Yet there is the same big estion of making a complete change in rroundings late in life. Many of them are ppy; many are not. Talk to any con- lerable number of farm women moved town and you will hear a large number complaints about having no chickens or ws or garden. They fret about the cost living when they come to buying from e grocer, huckster and butcher. There an atmosphere of freedom, even indoors, at is gone.

How shall I quit then? You ask, "If so any farmers transplanted to the town d city are discontented, and I want to cape the hard knocks the advanced years mand, what am I to do?"

That indeed is hard to answer. Certainly general rule can be laid down and be ccessful in even the majority of cases. s I said before, it is a question of indi- dual temperament.

In many cases it has been successfully ne by moving close to town, with an re or two to work with, or at least with large yard where a big garden may be ised, a cow kept, and chickens grown for eat and eggs. Most farmers will demand pig to take care of the kitchen swill, and it a splendid way of turning waste products to delicious chops. All these things are possible in most towns of two thousand.

Sooner or later, however, you will be lled upon to say what you are going to o. I have only the one suggestion to ake. That is (to repeat what I said at e beginning), wherever you go, and hatever you do, *don't quit working!* Keep our mind occupied and your muscles busy. uitting cold has killed more farmers before eir time than any other one thing I know . Doing a little work as they went along as kept many others alive and happy far ast their three score and ten. T. J. H.



Fairbanks-Morse "Z" Engine with Bosch Magneto

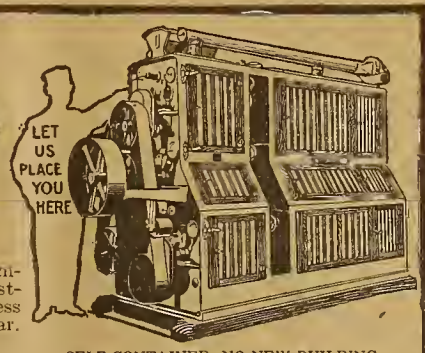
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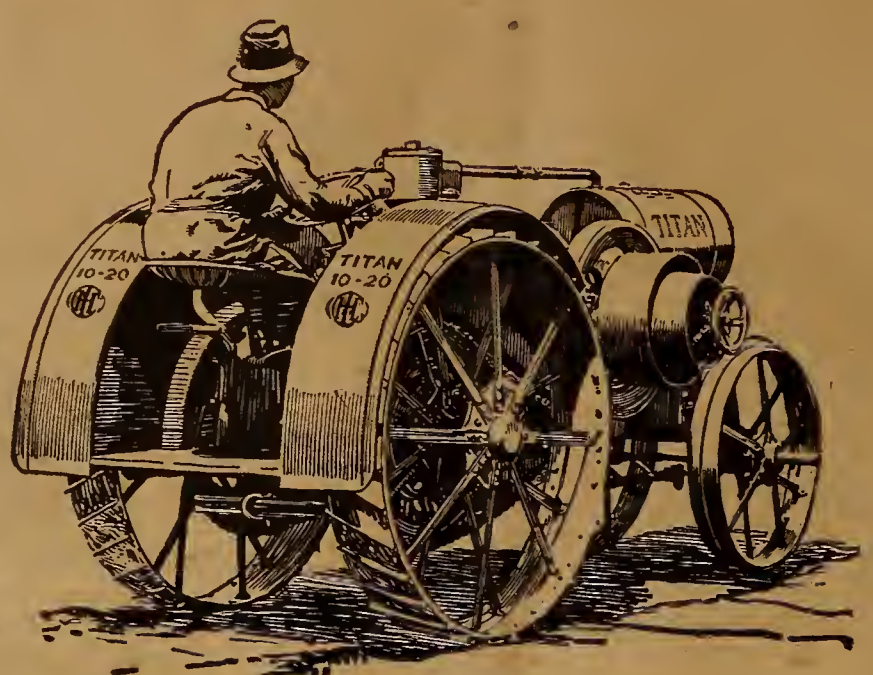
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What Interests You Most

[CONTINUED FROM PAGE 10]

a lot of prestige attached to winning, and it carries with it considerable advertising which could be got in no other way.

I have found that money prizes are considered more desirable. When the International was first started we gave trophies, but soon realized that most exhibitors wanted money instead. There are some few who still want plate and trophies, and we give them the alternative of taking either.

The various breed associations are very liberal in their prizes, both cash and trophies, and offer additional inducements to their own breeders. This makes winning worth while, for the prizes will go a long way toward paying expenses. At the same time, it causes breeders to bring with them only their best stock. Local associations might offer prizes for your fair.

Arranging the program is an important thing. Our show starts on Saturday with the students' judging contest. Sunday, of course, is a day of rest, but there is a night show, and a concert is given in the afternoon.

Monday the regular judging starts, and from then on until Friday there is not a pause.

The best time to hold a fair is governed by the weather in your locality, also by the season. The best time, aside from the weather, is when the farmer is not too busy.

The color scheme at the International is the same as one sees at any holiday affair. We have plenty of American flags around—in fact, the flags make a ceiling for the big arena. Plenty of red, green, purple, white, and other colors are worked in combination to good effect.

Economies in connection with conducting a fair are had to arrive at. There are no cut-and-dried rules to govern this part of the work. In the first place, help is a big item, and we have to take what is available. Because the job is a short one, quite naturally the wages are higher than what permanent work would pay. We endeavor to save wherever possible, but never attempt to sacrifice the fair to save a few dollars. Money is then a secondary consideration; we want the show to be the best, and so far we have been able to stage the best in the world.

Don't forget the boys and girls in your fair. We have a program for boys and girls with a view of stimulating their interest in live-stock production and making them contented on the farm. Your local fair is their first step toward the International.

All of your district, county, and state fairs act as feeders for the International. They control the boys' and girls' calf, pig, and lamb clubs in the country districts, showing them first at the district fairs. The winners move to the county fair, thence to the state fair, and finally to the International.

In addition to the junior feeding contests, we have a judging contest for the boys and girls. Thus they are afforded two personal opportunities to study live stock In the first place, they get the results of their feeding, and then they exercise their ability as judges against other boys from various States. They are able in this way to improve their picking ability, and next year can use this knowledge to select better calves.

I have said nothing about the business side of your fair organization because I assume that you will form your own fair association along the business lines you deem best, or along lines of which you have many good models in other district and county fairs in your part of the country. If there is anything of helpful suggestion in what I have said, I shall be very glad.

For Better Live Stock

SHOWING pure-bred live stock at the International or other shows may not interest you, but you certainly want to get the most out of your live-stock raising or dairying. If you have any questions that are puzzling you with regards to breeding or feeding farm animals tell them to FARM AND FIRESIDE. Our corresponding editor H. H. Kildee will be glad to help you. Always give full information, enclose stamped self-addressed envelope, and write care FARM AND FIRESIDE, 381 Fourth Avenue, New York City.

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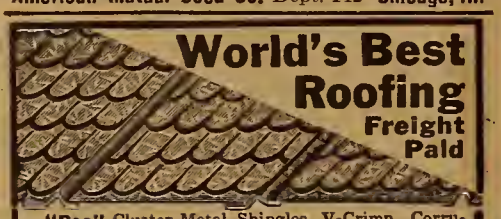
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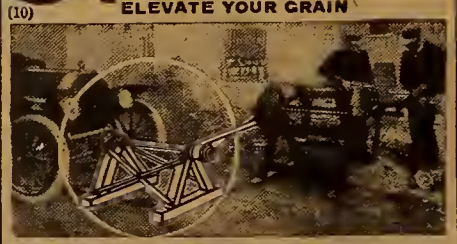
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[CONTINUED FROM PAGE 20]

nings over and make their rules. Since last ugust, when organized, they have held ight or nine meetings, and the spirit of co-peration is great. Some of these men go ith me when we hold meetings to get rowers interested, and what they have to y has more influence with growers than could have in a hundred years.

The first sales made in the county last eason under the old system brought $3.25 er barrel for all A grade apples above 2¼ ches packed in two sizes. By the time e bulk of the sales were being made the ling price in the county was about $5 a arrel for that same pack. I don't know a sale in the associations, even in the one at sold individually, that didn't get at ast 25 cents more than that.

I look forward to a time when in every ading station in the county there will be least one central packing house, and all ill be members of the county organization.

I hope all county associations will federe into one western New York association. hen we can sell all fruit from one central lling agency, controlled by representative growers duly selected. This central lling agency will have a general manager, sales department, a credit department, n advertising department, and an inspecon system.

If the four lake counties of western New ork organized we should have to have me such highly developed concern, for eir output of fruit averages $50,000,000 a ar. In our seven organizations we haned over three quarters of a million dollars' orth of fruit last year, co-operatively.

And what we have done in our community you can do in yours, whether it be rge or small. Co-operative marketing, arted locally in a small way, and gradual- built up in different sections, until finally takes in the whole field of farming to hich it is applicable, is no idle dream, and ou can do something right in your own me neighborhood to help bring it true.

Dream Your Dreams

[CONTINUED FROM PAGE 14]

nger that the highest of them may fade vay, so cherish them, cling to them, so rk them into your everyday life that ey cannot leave you.

Know that dreams are like spirits—they me to you some morning fresh and othed in glorious shape and robed in auty. They linger caressingly about u, you feel delight in their company, but you neglect them, or sneer at them, they rn sorrowfully away.

See to it, then, that while you are young d the dreams come to you in all their eshness and strength that you make em so much a-part of your lives that ey may never leave you. Oh, believe in eams! They are the only real things, e only things that may lead us out of ndage to the flesh, the only things that veal to us the good God, the only things at take us at last to walk beside Him, e only things that stand between us and aterialism and despair.

And there is joy in following that ideal, making that dream come true. There pleasure in climbing the mountain, in essing with joyous foot the path beneath u. There is bright hope in anticipating e outlook from the summit. There is athering strength from the effort of the imb. At last there is a little of the realiation; it will never all come to us, but me hints we get at last of the beauty and onderful goodness and glory of God. elieve me, young man, young woman, ere are heights that you may climb that ill make you stand and wonder and cry loud for joy when you see a little of the agnitude and strength and peace and eauty of the Almighty, and when all at nce it comes over you with a great wave feeling that you are a part of Him, and e is a part of you, and that there is a ivine Oneness of God and His world, of hich you are one of the chiefest parts.

And where lies the summit? I cannot y. Only on little foothills have I trod, nd always, afar off, more than half hidden y clouds, has been the summit, but now nd then, lifting above them, I have seen limpses of a shining peak, glorious in ght, beckoning to me as though to say:

"Press on, press on, if you have courage; me day, if you are strong and faint not, ou may stand upon the utmost height, nd all the glory of God shall be revealed o you."



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Manure provides some of the needed plantfood but *there is never enough manure to go around.* Fertilizer is needed to *make up the deficiency. Use enough to insure a big yield of well-filled, mature ears*—a crop that will stand the test of the sheller. There is more profit in that kind of corn.

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For use where the soil has plenty of available ammonia; where plenty of manure is used; where legumes are plowed under—

0-10-8 0-12-4 0-12-2 0-16-0

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What Do People Think of Your Letters?

FOLKS have been telling farmers for a long time that they ought to use a typewriter in their correspondence, but not until Helen A. Ballard, in "Printer's Ink," quoted some business men to show exactly how a poorly written letter from a farmer lowers their opinion of that man's business methods, was the exact advantage of typed letters made clear.

In an interview with Miss Ballard a wholesale and retail dealer says: "If we get a poorly written letter from a farmer we do not place much confidence in him. I think the farmers could get a little more from the various wholesale houses by corresponding on the typewriter and writing a good letter." Another letter from an office and typewriter-supply company says: "Some farmers like to correspond with mail-order houses by typewriter because they feel they get better service."

The advantages of the well-written letter are clearly brought out by Miss Ballard, who sums up the situation in the following:

"Leaders among farmers are becoming better business men. Many of them are specializing in some product which they sell to wholesale dealers personally or through correspondence. The scientific farmer who operates his farm as a business establishment does a manufacturing plant, finds his correspondence and business details increasing in volume. Some of these have seen the advantage of the typewriter in turning out more legible and more business-looking letters, as well as the value of keeping records of their transactions. A more adequate presentation of the advantage of the typewriter to farmers would undoubtedly stimulate a larger market.

"In the little State of Vermont one farmer has turned his fertile acres over to the growing of fancy fruits native to that section, and uses a typewriter entirely for his correspondence and bills. Another, who has entered the market with an attractive pound box of tiny maple sugar cakes, just the most convenient size to nibble as a confection, has established his agencies throughout New England, and is now opening fire on the New York market by means of a neatly typewritten sales letter.

"More farmers are daily adopting names for their farms, and are getting out good-looking printed letterheads. More and more they will realize—and especially if their attention is called to the fact—that an uncertain scrawl, or even Spencerian penmanship, looks less businesslike beneath the heading "Maple Grove Farm," "The Willows," or "Brookmount Stock Farm," than would a neatly typed letter. They are learning that a typewritten business communication creates a better impression and carries added prestige. A wholesale and retail dealer says:

"'I think it would be a fine thing for the farmers to use typewriters, because when we get a letter from one of them which is typewritten we notice it especially, and assume that he is a business man, and put more confidence in him. That is, we feel that if he offers to deliver a certain amount of grain, being a business man, he will feel some sort of responsibility and will make good on his word. On the other hand, if we get a poorly written letter from a farmer we do not place much confidence in him. I think the farmers could get a little more from the various wholesale houses by corresponding on the typewriter and writing a good letter.'"

SOME folks who claim to be cultivated don't like the harrowing details of farming.

Chances My Folks Have Given Me on the Farm

[CONTINUED FROM PAGE 9]

I am twelve years old, and in the sixth grade. I am looking forward to the time when I shall have finished my education and my two brothers and myself can run the farm for Mama, as Papa is dead.

I want to make ours an ideal country home.

Eighth Prize

Winner: F. W. Bausch
Girard, Pennsylvania

WHEN I was seven years old my father gave me seven white chickens in July, and I kept them till fall, and traded them for a Berkshire pig six weeks old, the runt of the bunch. I fed it until December, and sold it for $15, and in the spring Father gave me another one. I fed it all summer and sold it for $23. Then I had $38, and Grandpa gave me a small sow pig. I made arrangements with Dad to furnish the feed for half of the small pigs. I fed her, and the first litter she had six. I sold my three for $9, and had my old one left.

The next time she had eight, and I sold my four for $15, this making $62. With this I bought a colt for $60, and that same year it died, so all I had left was $2 and my old pig. Well, I sold my pig for $40, making $42.

I fed a bunch of five pigs that winter, and cleared, above all feed and skim milk, $75. With my $40 I bought a buggy and harness, and paid $175 for a horse, and gave a note for it.

Well, with the $75 I bought two pure-bred Berkshire sows for $70, and paid for all the feed they ate, and when they were six months old I took them to the Erie Exposition and won first premium with them. At the exposition I bought another sow for $70 and gave a note for it.

When I came home I sold half interest in them to Dad, and bought half interest in the boar he had, so I owned half interest in three sows and one boar.

This spring when they farrowed they had six apiece. The best sow died a week after she farrowed. She was worth $300, and that left us six orphan pigs, but we raised them all. One of the other six we sold for $30 when six weeks old.

This spring I sold my horse for $175, and my buggy for $50, making a total of $225.

This summer we bought the best boar in Pennsylvania to head our herd of Berkshires, at the Erie Exposition. He won grand champion over all hogs, 230 in number, and we have now bought a good sow.

We have 30 head in partnership, and have just purchased a hog house 24x60.

We will have pigs for sale at all times in the future. I think I have had a good chance.

Ninth Prize

Winner: Marie Ruehle
R. F. D 2, Chrisney, Indiana

I AM a farm girl fourteen years old. I graduated this spring from the eighth grade. I would sure like to go to high school, but Mother needs me at home. We live on a 200-acre farm, and have lots of work to do, but I love farm work.

We put out four acres of tobacco, and twelve-year-old sister and I attended to it most all by ourselves, and you know that was a lot of work—4,000 plants to the acre. We hoed it all over twice, and did almost all of the other work to it. We helped until every stick was put in the barn. Papa often said to Mother that he was so busy that he couldn't hardly help, and that the tobacco would go to waste He said he was so glad we could keep it clean. Papa promised us that if we raised the four acres of tobacco he would give us the profit of one acre, so then we can buy all of our own schoolbooks and winter clothes. Now that the tobacco is done I am going to help Father cut corn, then he promised me an extra nice dress.

Every morning sister and I milk seven cows, and Father has given us two calves to raise until they get big; then we can sell them and get a piano. We feed and water them every morning and night; and every time we take off the cream, Mother gives us some spending money. Now you can see how we love farm work.

With best wishes to you, dear Editor, I remain as a farm friend.



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Making Hams and Bacon at Home

By H. F. Grinstead (Missouri)

ANYONE who is fortunate enough to have hogs to butcher can have meat at home that is superior to any packer's product, hams and bacon of fine flavor and color well marbled and juicy.

Meat can be cured more easily if the butchering is done at a time when the weather is not extremely cold, just barely freezing at night. When the carcass has cooled, trim the joints and sides and lay them on a table or salt down in a box. On the flesh side of each ham or strip of bacon sprinkle about a teaspoonful of saltpeter, or until the surface appears as if lightly frosted. Large hams will require more than a spoonful. Cover the surface well with salt and brown sugar, in the proportion of three pounds of salt to one of sugar. This covering of salt and sugar should be about a quarter of an inch thick. Molasses may be used instead of sugar. The object is to improve the flavor and retain the natural juices. Pack the meat closely, and allow it to remain thus for a week, when it should be taken up and resalted with the sugar and salt.

The length of time meat should remain in salt will depend on the weather. If mild weather prevails so that the meat is not frozen nor the salt caked, it should take salt in about twenty days or less if the pieces are not exceptionally large. When it has lain in salt long enough, dip each piece in boiling water for thirty seconds in order quickly to dissolve the salt as well as to sear the surface slightly. Hang up, and begin to smoke with hardwood chips or corncobs. Paint the surface of each ham with molasses to which has been added finely ground black pepper.

The old-fashioned smokehouse was not always a success—it was too large. Much better is a large box or hogshead in which the meat can be hung closely. A stove should be placed at some distance, with the pipe running in at the bottom of the smokehouse. Thus you will get all the smoke without the heat from the stove. The smoke escapes slowly through holes in the top. Smoke for two hours every day for ten days or two weeks, when the meat may be packed away or left hanging. It is much safer to pack meat in some way so that insects cannot reach it. If the smoking has been done after insects have begun to fly in the spring, the meat should be dipped in boiling water to destroy eggs that may possibly have been deposited, then each piece wrapped in paper, and packed in a box with dry ashes, straw, or other absorbent material. It may also be put in sacks and hung where it is dry and cool. Never store meat in a damp cellar, and always, when packed, have some absorbent material about it.

Corn for Laying Hens

By J. T. Collins (Colorado)

AS CONSTITUTING more of a balance in itself, wheat is commonly considered the premier poultry grain. Under normal conditions it is the leading poultry feed in Canada, as corn is in the United States. In this country corn is more economical, ordinarily, than wheat, and consequently is favored. Its shortcoming for general use is its high percentage of carbohydrates. Corn is very fattening, and overuse is frequent with poultry, causing the hens to fatten instead of laying eggs.

Corn has special virtues which many do not realize. In particular it is valuable during the fall. At this season larger quantities of corn can be satisfactorily fed than at other periods. The quality need not be first grade. Even soft corn can be utilized, if the poultry keeper is careful.

One of the college poultry experts, Rice of Cornell, tells how a hen given access to several kinds of food will compound for herself an ideal balanced ration. Several classes of stock can utilize efficiently heavy proportions of corn in fall. Corn is heating. Molting hens need it to keep them warm; it supplies oil for the new feathers. Hens to be culled and sold for market get in good plump condition on liberal corn. Experienced poultrymen declare that corn, tending to fatten the growing pullet, is a distinct aid in hastening maturity and egg production.

It should not be interpreted that the foregoing suggests a fall ration of straight corn, but that the proportion of corn may be markedly increased at this season. All the year round a dry or wet mash containing a goodly amount of protein, furnished most effectively by a meat food, should be fed the flock.



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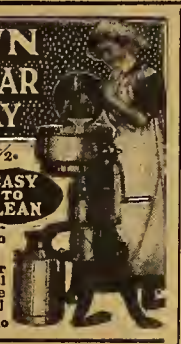
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HERE'S one of the hired girls who is still working. But, then, she is more of a family institution than a hired girl. She has been with Mrs. H. A. Wilkins at Port Chester, New York, for thirty-two years. And no city woman who chances to see this needs to think she can wheedle Ida Reichers away from there. She is riveted to the Wilkins family, and you couldn't pry her loose with a crow bar.



MARY CLARKE loved furs, but had none. So she got a friend of the wife of a man in Oklahoma who ran a fur store to get her a job as hired girl in that household. It was rather a "fur" cry from that job to the job she wanted, but she made it all right. To-day she is fur-buyer for six big retail fur stores in Wisconsin, Iowa, Missouri, Oklahoma, and Kansas. Incidentally, she wears a few of 'em, too.



VIOLA DANA wielded the scrubbing brushes attached to her feet with such good effect in one of her early motion pictures, that it made her rich and famous. To-day this little "hired girl of the screen" could buy a palace or two if she so desired. "Ingenue actresses who take well to 'hired girl' rôles owe Cinderella a rising vote of thanks," says Miss Dana. "The Cinderella play—in which the poor little slavey marries the gilded youth in the high-power racing car—never fails to make a lot of people part with a good admission price. And of course the extras always get their share of the profits."



ANNA CASE, who now sings in grand opera at a thousand dollars a night, used to be a hired girl in South Branch, New Jersey, at a thousand insults a day. Between times she used to work in her father's blacksmith shop and drive the village hack—all to earn a little to study her beloved music. Father Case used to show his appreciation of her talent and determination by thrashing Anna for wasting her time. "And I'm not a bit ashamed," says Anna, "that I was once a hired girl. It was honest work, and it helped me along."





NO WONDER the poor city housewives complain that they can't get help, with hired girls rising calmly to better things as you see them on this page. Here's Mary Baker of Oklahoma, who quit hired-girling to become a lace designer. That's her *business*. Globe-trotting is her *pastime*. She has walked 36,000 miles in this masculine costume in North and South America, Europe and Asia. Which is nothing, she says, to the distance she used to walk in her work around the house as a hired girl.



CELCIA ANDERSTROM of Chicago couldn't marry the man she wanted, so, in a huff, she went and got a job as a hired girl. She held it for fifteen years. Then the man she had wanted was killed in an accident, with his wife. Celcia quit her job, took her savings and her old sweetheart's orphaned baby, and retired to a little farm. You can see in the picture what became of this hired girl. And she says it suits her fine.



BUT there are others who don't think so well of hired-girling as Miss Case does. These nine Kansas misses, Carey, Suttle, Davis, Welsh, Ahern, Johnson, McDonald, Nichols, and Foley, quit in a bunch and went in for truck-gardening. They cleared $675 the first season, besides their living. Someone else can wrestle the pots and pans, say they, for 'tis much pleasanter to produce food than to cook it.



CLARA AUCHMOODY got tired answering door bells and telephones, going the round of breakfast, luncheon, dinner, wash day, ironing day, cleaning the silver, day out, up-stair sweeping, down stair sweeping, baking day, and the big Sunday feed. She was getting on toward fifty. So, she bought a ranch near Los Angeles, put on a pair of overalls, and went at it. She issues a challenge to any and all you male farmhands to do a bigger or better day's work than she can, whether it be currying horses, planting potatoes, or fighting the fungus that annoys all citrus growers, and pestiferous water commissioners who try to cut off her water at irrigation time.



MAMIE and Rosie Carey worked, one in the kitchen of a lawyer's wife, the other in the household of the head of a big advertising concern. One night they decided to become advertising agents, and they're earning good money. They are known all over the Southwest. Here's one of their stunts—passing bills, samples, etc., from the "grand-stand" of their "goat motor." They are now planning to distribute samples from an airplane. High flyers, Mamie and Rosie are.



EVEN the cooks of European royalty walk out and never come back, sometimes. Here is Mrs. Jens Nelson of Greeley, Colorado. She and her husband used to be "hired girls" to King Christian VIII. of Denmark. They cooked for His Majesty a long time, until finally one day they said, said they: "King, we're through. We are going to America." And the king had to call off a meeting of the imperial cabinet and go out and find someone to get his dinner.

THE wife of the Rev. John Dunn of Cosmopolis, Virginia, who is also the church assistant, used to be known simply as "Lewis Flowers' hired girl." As such, Addie Farish did the cooking for the family and the hands, did the housework, looked after the chickens and the garden, took music lessons, and practiced and recited at night. She scrimped and saved, went away to school, then married the minister, and there you are!

Cupid Astride a Mule

Beginning the amazing adventures of Davy Allen, a three-part serial, of which this is the first installment

By Samuel A. Derieux

Illustration by W. B. King

IN FRONT of the Ridgeland Hunt Club, Davy Allen jumped off his mule, jerked the obdurate head of the beast about, and tied it elaborately to the hitching rack.

"You stand thar, Pete," he said grimly. "None of yo' monkey shines!"

Davy was fourteen, an orphan and ragged. So was Pete. Both were indigenous to the sand hills of the Carolinas.

An early morning shower had drenched them on the way. Pete hunched his back and drew as close to himself as possible. Davy shook the rain off his tattered hat and thrashed his arms back and forth. Then he looked up at the big white club house.

It had been built by Northern people, and the hunting privileges bought up for miles around. From the chimneys on the roof, smoke ascended straight into the sky—an unfailing sign to Davy of a fine, clear day ahead.

His aunt Sally had told him to go to the back door. But Davy had a chip on his shoulder. *He* was not afraid of these strange folks who galloped and banged all over the countryside in winter and disappeared like migratory birds in summer.

A negro porter opened the door. Davy eyed him scrappily.

"Got a bill to c'lect for wood," he announced.

The porter looked significantly down the porch in the direction one would travel to the back door. Then he grinned. Although he was big, black, and burly, he had an understanding temperament.

"Come in by der fire," he said. "I'll git de sup'ntendent."

Once in the hall Davy's assurance vanished. The scrappy gleam in his eyes gave way to the light of wonder. The hall was large and lofty. Above a prodigious, rough-stone fireplace, with a popping fire of oak logs, projected a massive elk's head and antlers. The rugs were flattened black bears with gleaming eyes and teeth. Davy crossed the polished floor like a rustic in a museum. He stood close to the fire, his wet overcoat steaming in the warmth.

The chip had fallen from his shoulder. He was just a poor, ragged country boy. No one had ever told him that his face was as wistful and almost as comely as the face of a pretty girl, or that perched on a rock above a swimming pool he was a thing of beauty. He would not have believed it, nor cared if he had. Nevertheless it was a fact.

From somewhere came the sound of laughter and the slight rattle of dishes. The porter must have forgotten all about him. He wished he had taken Aunt Sally's advice. He was about to retreat and look for the back door, when into the hall sauntered two men and a woman.

One of the men was tall, slim, and smiled straight ahead as if he had just thought of something funny. He wore a blue coat and waistcoat; but from the waist down he was in hunting khaki and tight-fitting leggins. His hands were rammed deep in his pockets, and he looked lazy in an indulgent sort of way. But he was a city man for all his hunting clothes and leisureliness—Davy could tell that at a glance.

The other man was dark, precise, alert, with little polished nose glasses, and carefully trimmed black hair and mustache. As for the young woman—she was the prettiest thing in the shape of a "gal" Davy's eyes had ever rested upon.

She was almost as tall as the dark man, but her silken brown head barely reached the other man's shoulder. She was slim, straight, high-colored, and carried her head like Major Singleton's filly—Major Singleton was the only real aristocrat in the sand hills. She did not seem to care that a man walked on each side of her. Davy was accustomed to seeing "gals" stuck up over the attention of one man, let alone two.

Davy drew close to the corner of the fireplace and gazed into the fire. They came straight toward him, and the tall man hailed him.

"Hello, old fellow!" his voice was deep and resonant and kindly. "Wet, eh?"

"Not much," replied Davy, and hoped the incident was closed.

But an amazing thing happened. The young woman felt his sleeve. It took the boy's breath away like an unexpected caress.

"Why, you're drenched!" She looked straight into Davy's face. Her eyes were frank and brave like a boy's eyes. "What's your name?" Her voice was entrancingly sweet.

"Davy Allen, mam."

"Davy, your mother would be terribly distressed if she knew how wet you are!"

"I ain't got no mother."

"Oh!" Her eyes widened with sympathy. She turned to the spectacled man. "Dr. Fleming, the boy's drenched. He will catch a terrible cold. You must give him some medicine."

The doctor's lip curled incredulously.

"It won't hurt him, Agnes. He's been wet before, I guess." He turned to the tall man. "Girard, everybody seems to be in the billiard-room. How about a game?"

The girl's face flushed.

"You'll not play, Philip!" she cried. "You'll see that Davy's dried first."

The tall man in leggins had been leaning against the mantel, running his hand through his heavy brown hair, and looking down at the tableau before the fire.

"Your whims are my laws, Agnes," he said. "Besides, Davy's a trump. Stand close to the fire, boy. So. There—you'll dry in a jiffy."

"A little wettin' don't hurt nobody," deprecated Davy.

"Oh yes, it does," she declared seriously. "When you're dried, you'll have breakfast."

"Done eat once this mornin'."

"When?"

"Five o'clock."

"Five o'clock!" gasped Agnes. "Then I know you are hungry. I'll go and see about breakfast for you."

Dr. Fleming followed her out of the room.

Girard pulled a chair close to the fire.

"Dry your feet," he ordered. "You know we have to obey the ladies when they are young and pretty."

"She shore is pretty!" Davy shook his head at the inadequacy of words. "I ain't never see nothin' like it!"

"What did you come here for, Davy?"

"To c'lect a bill for Uncle Ben."

"Let's have it. I'll see the superintendent."

He went out whistling and came back whistling. He handed Davy the money. Davy deposited it in his inside coat pocket and pinned the pocket shut with a large safety pin Aunt Sally had given him for the purpose.



But an amazing thing happened. The young woman felt his sleeve. It took the boy's breath away like an unexpected caress

"Dry yet?" asked the man.

"Dry enough—if wettin' killed a body I'd 'a' been dead long ago."

"Ah, boy, I'd give a million, if I had it, for your lungs. Girard's my name, Philip Girard—sorry writer. The young lady is Miss Agnes Waring—beautiful heiress. The other member of the triangle is Bernard Fleming—brilliant young doctor. Know what the eternal triangle is, Davy?"

"Never heered tell of it."

Girard laughed.

"Breakfast ready!" called Agnes from the dining-room door.

Girard and Davy went in.

"Where's Fleming?" asked Girard.

"He's gone to send a telegram," explained Agnes.

She and Girard sat across the table from Davy. The sun came out and shone bright through the long French windows. Agnes clasped her hands on the table, and leaned forward, her eyes on Davy's face. Girard tilted back in his chair.

"How far you live from here, Davy?" he asked.

"Ten mile—with Uncle Ben an' Aunt Sally. Ma died befo' I put on short breeches, Pa befo' I put on long ones. There was seven head of us chillun, countin' boys an' gals. Uncle Ben, he spoke for me."

"Davy, Uncle Ben's a man of taste!"

"I was the stoutest an' could work."

"Ah, I see. Go to school, I suppose?"

"Done through. Readin' an' writin' an' 'rithmetic's all the edication a body needs, Uncle Ben says." Davy bit off a chew of juicy sausage. "Schools 'roun' here don't learn a body nothin', Uncle Ben says."

"I think I know Uncle Ben," remarked Girard, and Agnes laughed.

Davy laid down his fork.

"Why, he ain't never been no further than Camden!"

"I gathered as much, Davy; but I know him all the same."

"Uncle Ben, he—" began Davy, then stopped short and applied himself to his sausage as Dr. Fleming entered the room.

The doctor stood by the buffet and looked down on the boy's matted hair, his ragged coat sleeves dragging on the white tablecloth. This boy belonged in the kitchen. It was inconceivable to Fleming that Girard should feel any real interest in the ragamuffin; and there was no mistaking the amused comradeship in Agnes Waring's eyes as she studied the face of the boy. The situation annoyed the doctor, but he had better make the best of it. He sat down a little distance and polished his glasses. Agnes smiled at him.

"Any birds where you live, Davy?" asked Girard.

"Millions of 'em!"

Girard turned to Agnes.

"What do you say to going back with Davy?"

The girl jumped up from the table, her face aglow.

"We'll do it! I'll tell Aunt Julia I won't be back for lunch!"

She ran out of the room. Dr. Fleming pinched his glasses on his nose, rose, and followed her. While Davy waited in the hall, Girard went up-stairs, and returned in hunting paraphernalia, with his gun under his arm. Out at the kennels they turned loose a big white and brown pointer.

"I wonder if I can get that horse Fleming usually rides?" Girard asked the groom in the stables. "Saddle him up anyway." He turned to Davy. "Did Fleming say he was going?"

"He ain't said nothin' as I recollect. Ain't much of a talker, is he?"

"I don't know about that," laughed Girard. "Probably does a lot of talking I don't hear. Don't care much about hunting, though."

"Well, if he don't care 'bout huntin', what the thunder does he want to go for?"

"The triangle, Davy, the triangle!"

Davy knew nothing about triangles; he did know that a laggard spoils a hunt.

"I kin tell him," he suggested with a slight grin, "that the land over thar's posted, an' I ain't 'lowed to bring only two at a time."

"But suppose Fleming goes, Davy? Then I'll have to stay at home, or your bluff will be called."

"Miss Agnes, she'd take you."

Girard shook his head.

"I don't know about that. I'm afraid to risk it, Davy. Come on."

At the front of the club Agnes was coming down the broad steps, pulling on her gloves. She looked more like a boy than ever in her little laced boots, her short velvet skirt, her leather jacket and rakish hat. Her cheeks were glowing, her eyes sparkling. Dr. Fleming held her gun—a beautiful little twenty-gauge. Davy's eyes fastened on it enviously. The doctor was still in his business suit.

"I'm looking for an answer to my telegram," he explained to Girard. "If it comes in time I'll try to join you—provided this boy here can give me directions."

Davy glanced significantly at Girard. Now was the chance to eliminate the doctor. His loyalties were the loyalties of a boy, quickly formed and to the death.

"Wall," he said slowly, "thar's two or three ways you kin go—one of 'em by the old Singleton place, but that ain't used much no mo'. Then thar's the old Pineopolis road. If you take that, you kin turn off at old man Skelton's; then the nighest way is through [CONTINUED ON PAGE 36]

The Basket Habit

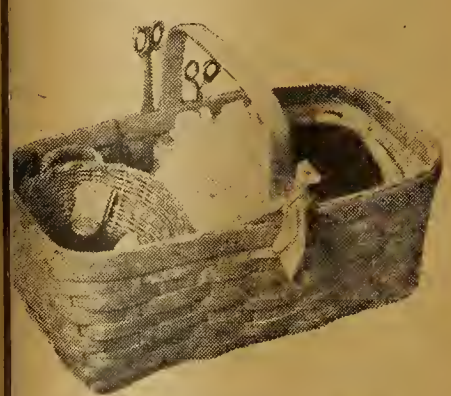
By Mary Harrod Northend

OW on earth do you stand it? You have made four trips to the cellar eady to-day and it is only noon! Your stpan is propped up beside the kitchen ve and your furniture polish is on the k stairs. And I haven't seen you do a ch of mending, and I have been here r a week. If I kept house as you do I'm e I should be a wreck inside of a month." This outburst came from Aunt Mary, o visited us last fall, which was several nths ago, and I'm sure she couldn't say same thing if she were here to-day. u see, I took her advice. She preached askets," and I listened and am now ng baskets.

had never thought of it in just that y, but I have discovered that the more ork my brains in housekeeping the less hands and feet have to do. If all house-pers realized that, how many more ld have a simple market basket fitted with a needlebook, scissors and cotton, ittle bag holding buttons of all kinds, ending ball, etc., and keep it ever near! can easily be carried from kitchen to ng-room without leaving half of the essities for mending behind.

f a neighbor comes in on an errand and os to chat, you will not bother to hunt your sewing; but if it is all in one basket and you will pick it up.

ll through the busy day there will be es when you can take a stitch or two—le waiting for a cake to bake or for the



My ever-ready mending basket

to come in to dinner. The amount of ing you can accomplish in these spare utes will astound you—it did me.

may be the week's mending or the ing of a school dress, blouse, under-r, or table linen; but whatever you are with, put it into your basket each ning and carry it up-stairs at night.

basket of this same type can be used changing linen. If the sheets, pillow , towels, etc., are put into it, many to the linen closet or chest will be d.

nd now I bring up all of my daily plies from the cellar at one time. It's y done. You see I hang a basket over arm and do a little planning before one trip.

used to be one of those housekeepers have a way of putting things down where, and then having to hunt madly he dustpan, the brush, or the furniture h. Now I keep all such things in a et in the back hall.

hen caring for plants, a smaller basket, as grapes come in, is invaluable. In it be placed a pair of scissors or a knife, oth with which to wipe up the water is sure to be spilled, a package of plant , and a soft brush to keep the soft ety leaves clean. Dampen a sponge to on the shiny rubber leaves. In this way ecessary things can always be on hand, ogether, and can be carried about the e with little trouble.

your esthetic sense is shocked by such omely basket as a common market et is apt to be, a little paint will dy that. For instance, the outside ne mending basket may be rose and , and the inside rose. And the bags needlebook may be of some pretty ed cretonne. A basket fitted out in way would make a dainty gift for any ekeeper.

r Christmas and Easter presents, or time during the year, little inexpensive ets can be painted or colored with dye ctractive shades and filled with fruit, ers, and even vegetables. Send a et that has been colored a golden-n, filling it with fresh eggs, and lay on a little cluster of wild flowers, to an id friend; or, at Christmas time, color it basket green, tie on the handle a of Christmas ribbon, fill it with

[CONTINUED ON PAGE 41]



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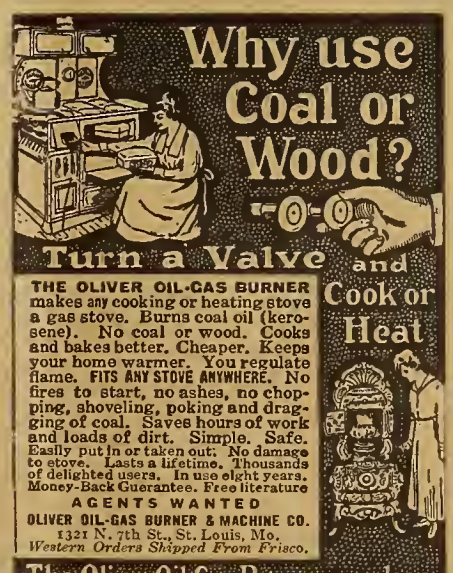
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How We Are Meeting the Rural Health Problem in Michigan

By Esther E. Hoare Lincoln

I AM a plain country woman, and this little article of mine does not claim to hold a solution of the rural health problem or to be in any sense professional. It is simply a statement of some observations and conclusions along this line made by one of many country women who realize the need of "somethin' doin'."

The epidemic of influenza which swept the country with such terrific results a year ago, and which medical men said might return this winter, proved conclusively that the facilities for caring for the sick in the average rural district are entirely inadequate.

The causes of this condition have their root in two main facts—namely, the distance of thousands of farm homes from nurse and doctor, and then, often, excessive charges that both doctors and nurses make when they do happen to be accessible. During the "flu" siege last year, nurses and doctors were so swamped with calls from within the limits of their own immediate town or city that thousands of calls from rural districts were neglected entirely. If accurate statistics showing the deaths resulting from this condition could be compiled they would probably be appalling. Five hundred thousand—nearly twice the number of our war casualties—is the nearest estimate we have. These are insurance company figures.

In our own neighborhood one family of seven was in bed an entire week before it could obtain even a brief visit from a doctor. Often just one member was well enough to attempt the entire care of several sick ones, with the occasional help of a neighbor. Fortunately, this particular family escaped without a death, but others were not so blessed. One lost two young daughters within a week, though the parents made frantic efforts to secure proper medical care.

Still sadder was another case in a neighboring county. The parents and several children were ill, unable to get help, though they sent repeatedly for a doctor. The father tried, in spite of his illness, to care for the others. The mother, however, died, and he was too weak to lift from her side the sick child who lay there. When doctors and neighbors finally arrived, that child, and a baby too, was dead.

Of course, such sad, wholesale deaths do not often occur when there is no epidemic. Usually, if the need is urgent, some aid—good, bad, or indifferent—is obtainable. Yet the fact remains that during one of the most terrible plagues of history thousands of lives of inestimable worth to family and commonwealth were lost because the community, state, or some other power that is had not made provision sufficient to meet the great emergency.

The last two years have demonstrated that our men and women alike are willing to give their lives, if necessary, to protect our Government. Every death is an economic loss as well as a personal one, and the total loss to the commonwealth of man, woman, and child power each year through disease mounts to the millions. These two reasons alone, not considering the humanitarian side, would justify governments, local, state, and national, in making health appropriations for crusades such as the "Children's Year," for tuberculosis surveys, and for nurses and hospitals.

In Michigan the laws governing nurses are very stringent, a fact which led Governor Sleeper to have a bill introduced in the last legislature providing for a grading of nurses according to their training, and with a scale of wages in proportion. He stated that families with an income of $2,000 could not afford to pay a nurse $35 a week. (How many farmers have an income of $2,000?) The governor went on to say that there were capable women in every community who could adequately meet the demands of many cases if they could do so "within the law." This bill was "smothered," but will doubtless be awakened and passed at the next session.

The Tuberculosis Survey previously mentioned is, I believe, a strictly Michigan measure. The legislature passed a bill appropriating $50,000 for each of the two consecutive years 1916 and 1917 for this survey, the purpose of which, to quote verbatim from the report, was:

(1) To find by actual physical examination every case of tuberculosis that can possibly be discovered in every community in the State; (2) to give every person so discovered and his family all the information necessary to make an effective fight for health; and (3) to arouse each community as much as possible, during the limited time at command, to a realization of the necessity of bending every local energy to an effort to cope with the disease locally."

The fact that before November, 1916, 2,957 cases were diagnosed through this survey as tuberculosis is ample proof that it was a movement which actually moved. Add to this the fact that these cases were cared for and advised as individual cases, and not in the aggregate, then surely no $50,000 was better expended. It is to be greatly regretted that, for reasons generally unknown, a bill appropriating another $50,000 for follow-up work failed to pass. The survey had met with the greatest approval, both in city and country. The Michigan State Grange, in session at Lansing, passed resolutions endorsing it most highly, thus giving it the approval of 50,000 representative farm men and women. As much work was done in rural districts, they were in a position to know whether or not it was worth while.

The State Anti-Tuberculosis Society has been endeavoring to carry on the work in a way similar to the survey, but of course with its limited force and funds it cannot gain the ample results gained by the survey. It is, however, becoming more and more a power against the spread of the great white plague, and it is a very important factor in the war which Michigan is waging to stamp out the disease. It publishes a quarterly magazine, "Michigan Out-of-Doors," full of interesting information and help to anyone interested in health propaganda. This is sent free on request from the society headquarters, Science Building, Ann Arbor.

Michigan is justly proud of her state hospital, located at Ann Arbor. Here, at the expense of the State, any sick person who has failed to get help from local physicians may, if unable personally to meet the expense, have free examination by the best of specialists, and hospital care, if necessary. until cured. To those who desire to meet their own obligations the charges are moderate. Annually hundreds who could not find relief elsewhere are discharged, well and able to take up their normal work again, thus, in economic saving, restoring to the State what was expended to them. The last legislature appropriated $700,000 for the building of a new hospital which will be the last word in service and equipment.

Such hospitals are of inestimable worth to those who can avail themselves of them. Obviously they cannot provide for all of Michigan's sufferers who are really in need of skilled medical and hospital care. Not only is the number too great, but many men and women cannot go that distance from home, comparatively small as it may be. Mothers are unwilling to be a day's journey from their little ones; fathers feel that, for the family's sake, they must somehow keep in touch with business or farm. And so many go on year after year, carrying the burden of some physical ailment which often a week or two in a hospital might rectify or, at least, greatly alleviate.



WHEN we asked Mrs. Lincoln for a picture of hereslf, she tried bravely to get one for us; but, living in the country and possessing no kodak of her own, it has been rough sledding. She admits, that she did finally get one, but refuses to send it to us. She says of it: "I don't cherish many illusions concerning myself, but that picture! An expression mingling lunacy and Bolshevism in equal portions—when I'm normal, the first quality is in the ascendency, and I wish above all things to 'look natural.'" So she sent the above of herself and three of her kiddies. We maintain she has a pretty healthy-looking family, and this isn't all of it.

Speaking of her work she says:

"For several years I have acted as chairman of the State Grange Anti-Tuberculosis Committee and as member of the executive committee of Michigan Anti-Tuberculosis Society, my duty being to act as a connecting link between the rural people of Michigan and the last-named organization. That, and the fact that I am mother to five lusty kiddies, has awakened my keen interest in rural health work and conditions. So I sincerely hope that the enclosed article may be sufficiently definite and interesting for your use. It may be a little revolutionary in spots, but I assure you that all the instances cited came under my direct notice, and some of them seemed to call for revolutionary remarks—even doctors and nurses admit that."

THE EDITOR.

Sanatoria for the care of the tubercular have been established in many counties, and more have such under consideration. In cases where the counties are small, two or more have united to build a joint sanatorium. Why would it not be feasible, when building such, to go a little further and add a general hospital which will be within a few miles of every person in the county? A place where the new mother may receive proper care for herself and baby, instead of the hit-and-miss nursing all too common in rural districts. A place where the busy farmer may, if necessary, have the best of hospital care at reasonable charges, and yet be near enough for Mother and the boys to run in every few days and report on farm matters. The mind must be "aizy" in order to get the best bodily results. The best of care is none too good for the lowliest when the question of health or of life itself is involved; county, state, and national governments can get no surer returns than appropriations for the health of their citizens.

Probably there is no calling more worthy of its hire than that of the doctor and nurse. But I wonder if that hire should be so great that ordinary families, whether rural or urban, cannot cope with it unless they burden themselves with debt? Last winter, nurses charged $7 a day for their services, and, of course, received their board besides. How long does it take the farmer who may read this to earn that amount by the "sweat of his brow"? Doctor's visits, except for an occasional grand exception, are from $2 up to the sky.

As for specialists, unless consulted through medical colleges or schools they come so high that they should be in the taxable list of luxuries. A poor Michigan farmer with three tubercular-looking children had been suffering for years, and was chronically in debt because of doctors' bills. Getting no better, he decided to consult a specialist in the metropolis a hundred and fifty miles from his home. The charges, he told us personally, were $225.

His treatment came at regular intervals—a medium-sized bottle—for $10. It helped him all right, but imagine his sensations when he found out through an analyst that he was taking merely pure olive oil with a little "something" to disguise it.

The farmer told this freely to a friend who was afflicted with a trouble similar to his own. The friend is using olive oil, and recovering his health.

It is not that the farmer is unwilling to give his family the best of medical care, or that he is unwilling to pay a just fee; but, as he must clothe, feed, and educate them as well as "tend to their health," is it any wonder that, once in a while, he risks home care and home remedies once too often? The fact that health is cheap at any price does not aid him in "digging up" the price.

Some of the mining towns in the West have met this difficulty by hiring a community doctor at a generous salary provided for by the mine owners and miners themselves. This doctor answers any and all calls without any charge whatever, except for the actual medicine. In this way, every family bears its share of expense, and it is a burden to no one.

Rural districts in many States have nurses who work in a similar way, with their salaries and expenses provided through taxes. Nurse and doctor working thus together could do miracles in bettering rural health conditions.

The community nurse has already amply proved her right to exist. Here, as elsewhere, "an ounce of prevention is worth a pound of cure," and the nurse, in her work with mothers and children, has accomplished wonders in "heading off" disease.

In every community are young and prospective mothers who need and will gladly listen to good advice as how to care for their babies. With rural nurses fewer babies will need artificial feeding. (As I write, I have in mind a young mother whose baby is "blue" because she herself is not taking the right and sufficient nourishment which in turn should nourish her baby.) Fewer babies, who should be almost entirely on a milk diet, will sit up at the table eating meat and pastries, and drinking "tassie," as one little fellow in our neighborhood does.

Children's lunches, proper exercise, the right amount of sleep, first aid, and other subjects helpful to mothers may be discussed in informal mother meetings. The frequent examination of the individual children for physical defects and weaknesses aids in building up the healthy farm man and woman of to-morrow. In localities where the rural nurse exists this is the work she is doing, and the farmers are gladly paying for it. A nurse in every township, or at least every county of every State would be the best possible health safeguard.

Obviously, however, in epidemic or times of general sickness one doctor and one nurse in a rural community, or elsewhere, could not meet the demands made upon them. I have been thinking much about this, and wondering why we could not have emergency helpers enrolled with the nurse or doctor. During the war the women gladly registered for service. Surely there are many women who would as gladly register to give more or less time to the care of the sick when the demand for help comes. Of course, they would not be professional, but under the direction of doctor and nurse they could do much, and would be vastly better than no one at all. Their charges would, naturally, be moderate, and could be met by the individual family, or, in rare cases, by a community fund.

I do not know what provisions other States have made, or are making along this line—doubtless many that would be well worth "catching." It is to be hoped that when there is 'something doing' of this kind, in any State, it will develop into an epidemic which will sweep the whole country, and which will bring in its wake, not terror, suffering, and death, as did the 'flu,' but unbounded hope, vitality, and universal health."



If Santa Strikes

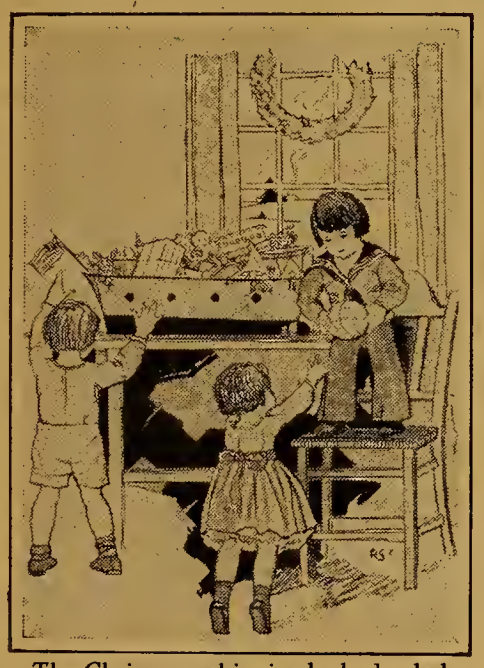
By Emily Rose Burt

IF SANTA CLAUS and all the Christmas trees should go on strike this year and refuse to have anything to do with presents, there are any number of other ways to distribute them, jolly and original ways too, that are not much trouble or expense.

How delighted the family will be on Christmas morning, especially the children in the family, to see the big living-room table apparently snowbound. The whole surface is covered with a layer of white cotton batting sprinkled with artificial snow, and rising out of the snow are just as many sparkling snow-covered mounds as there are members of the family. On each snowy hill a tiny white-clad Eskimo sits or slides, and each hill is likewise marked by a gay red-lettered sign bearing the name of the owner.

Lifting the imaginary blanket of snow—in reality a blanket of sheet wadding besprinkled with artificial snow—each person discovers a cache of gifts.

If there is a dog in the household you can plan a fine surprise for the children. Christmas morning he may come trotting in wearing a wee red jacket and a collar of tiny jingling bells. He makes the rounds, and each person is entitled to one bell, but must pick out the one tagged with his or her name. The other side of the tag mentions the place where that person's gifts are concealed. One label may state, "The lowest shelf of the china closet," another will say, "Under the hall table," and so on.



The Christmas ship, its decks loaded with golden packets

A very simple way which makes the presents last a long time is to put them all beforehand into a big clothes basket, decked with ground pine or other Christmas greenery. When it is time to have the presents the basket is brought in to occupy the center of the room, and the folks all sit in a circle around it. One at a time, in turn, draws a package, looks at the name, and hands it to the proper owner, all watching while it is opened.

This makes the opening of the parcels a long-drawn-out sweetness, and everyone shares in everyone else's joy.

The kiddies will love a Christmas ship, its decks loaded with golden packets. If there is a toy ship in the playroom or among the gifts of the day, it is not difficult to arrange it on a table, trim it with a bit of holly, and heap its decks with the Christmas presents tied up in gilt and silver paper to seem more treasure-like. A small boy in his sailor suit may be chosen to help unload it, or a real sailor uncle or cousin among the grown-ups.

Almost every family has a toy express cart, and this can easily be made effective as the center of the occasion. To each corner of the cart fasten upright a tiny evergreen tree, or merely a branch decked with a few shining ornaments or colored balls. Spread the center of the cart with a yard or so of scarlet paper or cloth to hang over the edges. On top of it in the cart, sheltered by the four little corner trees, pile the presents.

Quite a pretty way to have the presents on Christmas Eve is to arrange in a burning row, on the mantel, a candle for each person, corresponding to age or size. Thus, Baby may have one of those very wee ones, the older children may have graduated sizes—Father may have a very tall one, Grandma, who is portly, may have one of those plump bedroom candles, and so on. Each candle has on it a ribbon bow of distinguishing color, and all the presents that can be found about the room, tied with that particular color, belong to the owner of the candle.

Some time ask each member of the family to do his or her own packages up in a distinctive way. Maybe Aunt Mary will tie hers all in green, with a sprig of partridge berry tucked in the top; Cousin Jane may use yellow raffia to tie hers; Mother may choose gray paper and orange ribbon; some joking brother could use newspapers.

A very simple and happy plan is to assign each person a chair with a green wreath hung on the back, from which a gay red holiday balloon sways cheerily in air. On the seat of the chair arrange the gifts that are coming to its assignee.

Animals and People—Good Enough to Eat

By May Belle Brooks

PLENTY to eat and something different from what they get at home are two things essential to the success of any celebration for the little folks, and especially the Christmas frolics. And the more spectacular you are able to make the refreshments, the greater will be their appeal.

At one party I remember, the children all clapped their hands in super-joy when they found little animal crackers as favors at each plate, glued upright to crackers and cookies. A bit of icing or thick molasses anchored them securely. The long Saratoga flakes were used too, and an effect not unlike that of a rocking horse was the result.

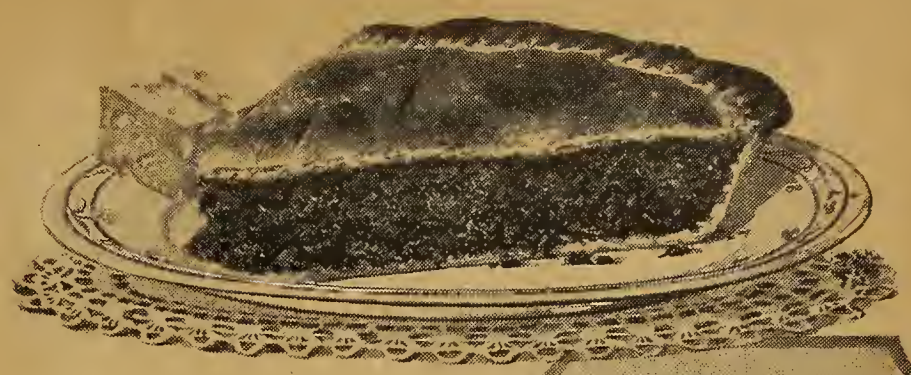
Another clever way to use them is in a parade around a big cake. Insert the crackers into the icing just before it sets. A very pretty centerpiece is obtained by pasting the animals to a long strip of narrow paper, and, when dry, bending it into a circle around a Noah's ark placed in the middle of the table.

Or a fence can be made by sticking sweet wafers together, end to end. Then fasten the animals to small crackers and put them inside the fence. A little red barn may be fashioned of cardboard.

Even so simple a treatment as dipping each animal in melted chocolate or colored icings, or merely putting two of a kind together, sandwich fashion, with a generous filling of icing, a date or fig paste, will be appreciated.

The very young children delight in little letter blocks that may be eaten. For these use square angel cakes covered with colored frosting, and on each of the six sides

[CONTINUED ON PAGE 40]





Mince Pie

"Like Mother Used to Make"

is but one of the many filling, luscious good things YOU can make—oh, so easily!—out of savory



None Such Gems

NONE SUCH MINCE MEAT

The New Recipes

exhibited on this page suggest some of a wide variety of appetizing dishes.

For example, hot None Such Gems for breakfast lend a little variety to a meal too often the same. Bake enough of them.

For luncheons that must be taken somewhere, Oatmeal Cookies with None Such Filling are sustaining as well as delicious.

And to the stuffing of the game that's carved at your board, a single package of None Such will add richness and flavor.

TRY THESE RECIPES

None Such Gems—Make a pie crust dough. Use gem pans, greasing pan as usual. Roll dough moderately thick Line each gem pan with dough in the same manner as for pie, fill with None Such Mince Meat thickened with flour. Make a covering of dough. Serve hot.

None Such Sandwiches—Cut slices of bread very thin. Make a filling of None Such Mince Meat, to which may be added onions, celery, pimentos. Use crisp lettuce leaf.

None Such Relish—Mix None Such Mince Meat with green or red peppers and onions.

None Such Pudding—(*Recipe using left-over biscuits*)—4 or 6 biscuits; 1 cupful dark corn syrup; ¼ cupful brown sugar; ¼ cupful butter substitute; 2 egg-yolks; 1½ cupfuls None Such Mince Meat; 2 egg-whites.

Soak biscuits in warm water until soft and add the other ingredients in the order given. Beat egg-yolks thoroughly before adding. Mix ingredients completely, put in a well-oiled baking-dish and bake thirty minutes in a moderate oven. Make a meringue of the egg-whites, heap it on the pudding and allow to brown in the oven.

Oatmeal Cookies with None Such Filling—*Cookies*—1 cup sugar, 1 cup shortening, 3 cups oatmeal, 3 cups flour, ½ cup milk, 1 teaspoonful of soda. *Filling*—None Such Mince Meat, 2 cups; 1 cup water. Boil till thick and spread between cookies.

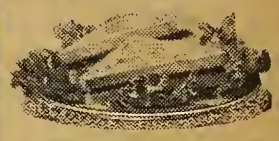
None Such Jelly for Dessert—1 package Jiffy-Jell (either lemon, orange, or loganberry), nuts, None Such Mince Meat. Before serving, cover top with whipped cream, sprinkle with finely chopped nuts and place a cherry in center.

None Such Dressing for Duck or Other Game—Make dressing in the usual way; add 1 package None Such Mince Meat, and more apples and celery to suit individual taste.

NOTE—None Such Mince Meat prepared in the same manner as for Mince Pie, should be used for all these recipes. Use according to directions on the package.

You'll find yourself trying some of the other recipes suggested on the None Such package.

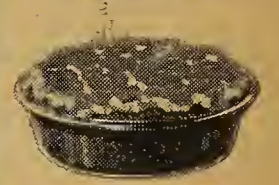
Merrell-Soule Company, Syracuse, N. Y.



None Such Sandwiches



None Such Relish



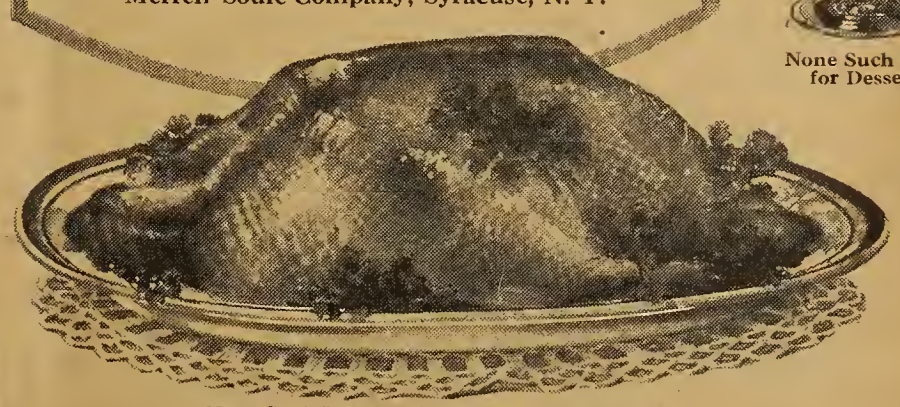
None Such Pudding



Oatmeal Cookies with None Such Filling



None Such Jelly for Dessert



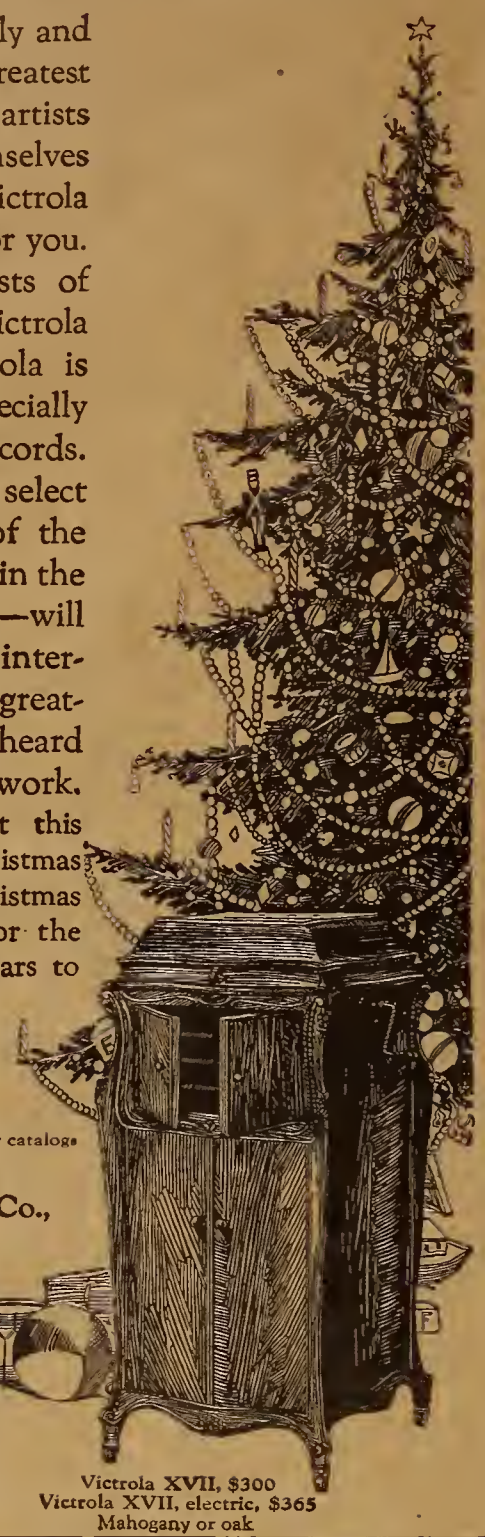
None Such Dressing for Duck or Other Game

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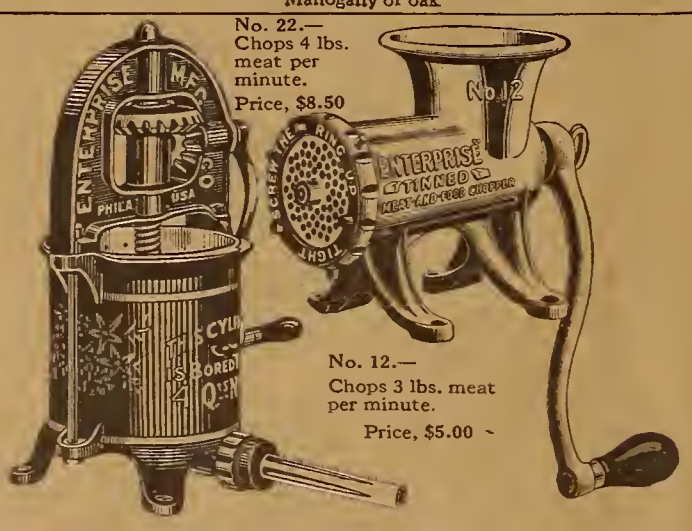
Victor Talking Machine Co.,
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Victrola XVII, $300
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Mahogany or oak

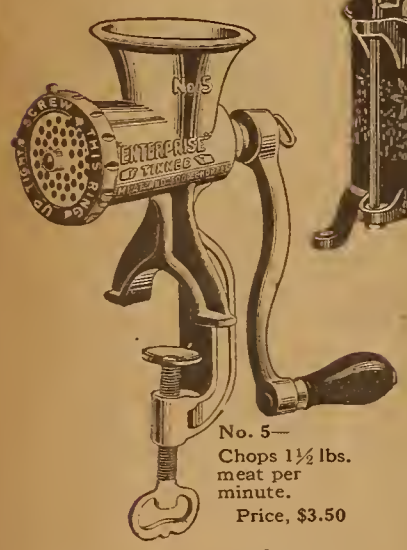
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5-qt. size, Japanned, $14.50
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Price, $5.50

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"ENTERPRISE"

Cupid Astride a Mule

[CONTINUED FROM PAGE 32]

his parsture till you come to the big pine that's been struck by lightnin', then—"

"Oh, that'll do!" broke in the doctor. "In what vicinity are you going to hunt?"

Davy was pinned down.

"Gant's Sto'," he admitted.

"I'll inquire for Gant's Store. I'll probably hear the shooting."

The horses had been brought around. Dr. Fleming helped Agnes mount and handed her the gun. Girard's big pointer, Jess, ran back and forth barking. Man and girl rode in front. Davy and the mule jogged behind. Now and then the boy ate crackers and cheese in a country store. The birds'll keep."

Davy dismounted and pulled the mule like a dead weight to the fence. Pete's countenance gave no token of his inner thoughts. But the boy knew the mule. A mile and a half away was Pete's stall. It was a sorry stall, but there's no place like home. Davy secured the mule to the fence with a halter.

His hands in his pockets, his ragged overcoat thrown back, his trousers shrunk halfway to his knees by many soakings, and showing the rough gray socks, Davy

Something About the Man Who Wrote This Story

By Himself



Samuel A. Derieux

I WAS born in a city—Richmond, Virginia—I hate to think how many years ago, but my earliest recollection is of myself looking forward to Christmas and summer vacations when I could go to my grandfather's plantation in South Carolina and hunt.

I have been to colleges and universities, all in the city—Richmond College, Johns Hopkins, Chicago, Columbia, and have had a brief and disastrous experience in a bank; but I never get over my longing for wide horizons and for tramps through woods and fields. My best friends are country people, and all the characters in my stories are people who live away from cities. When I try to write a story of the city the buildings close in on me and choke inspiration.

Dogs have made my fortune, such as it is. My first story was a dog story, and so have most of the others been. My father was a preacher who had rather hunt than preach—I hope he won't see this—and there were always bird dogs in our back yard.

My first job was as country school teacher, and I used to come to work with a gun, which I stood up in the corner, while outside a dog lay in the sun waiting for school to break up. And afterward, when bad health drove me and my wife—we didn't have to be driven very hard—to the woods, we had as companion a black pointer, and depended for meat on the game he found and I killed. There was no shortage of meat in our cabin either.

So when I started writing, dogs were the heroes of my stories, country people the human characters, and woods and fields the background. I think it will continue to be that way—for a man writes of what he loves.

called out the directions. The hoof beats were silenced by the sand.

The country through which they rode was rolling, and covered with a growth of scrub oaks, no taller than a man on horseback. Above this growth rose an occasional long-leaf pine, straight-stemmed, heavy-topped like a palm tree, shimmering green in the sun. Lazily the broken fragments of the late storm clouds, billowy white now, followed one another across the lofty blue sky.

On the top of a hill, where three tall pines stood grouped like an outpost, Agnes drew up her horse. Below rolled the undulating hills, that sank by regular gradations into the river swamps. The shadows cast by the drifting cloud patches crept across the hills. The air came fresh and tingling like cold spring water. Two or three buzzards sailing far aloft were the only signs of life. Davy pushed up his mule impatiently, and the three were together.

"This is lovely!" exclaimed Agnes. "There is more color here and more peace than in the mountains!"

"Yes," said Girard. "There's something disturbing about the mountains."

"Look at those hills," breathed Agnes. "Was there ever such a blue! I wish Dr. Fleming had come."

"Well, we'll come out to-morrow and bring him along."

"No—the telegram he is waiting for may call him home to-morrow. It's something about the hospital he has just built."

Davy could stand it no longer.

"We're goin' to lose the dog," he broke in. "I think we'd better be gittin' along."

"Right, Davy!" Girard touched up his horse.

It was one o'clock when they reached Gant's store—a long unpainted shack, plastered with old signs and circus posters, a blot on the landscape. Man and woman reined up. Davy pushed by them doggedly and went jogging down the road.

"Hold up, Davy!" cried Girard.

Davy stopped and looked back.

"We're mighty nigh thar," he pleaded.

"Can't help it; she's hungry," replied Girard. "She thinks she wants some crackers and cheese. You see, she never went sullenly up the rickety steps of the little store porch.

"Is this here a hunt or a picnic?" he muttered to himself. "Dammit all!"

Girard and Agnes were waiting for him. They entered the store. Behind the counter stood black-eyed Susan Gant, her cheeks as ruddy as a Rembrandt portrait. She gave Girard a smile. A rustic belle was Susan; that smile had smitten many a heart.

Across the counter leaned Jake Raines, sallow, lank, enamored—mean too. Wherever black-eyed Susan was, there was Jake Raines also. He glowered sourly at the visitors.

"Some cheese and crackers," said Girard, "and a box to eat 'em on."

Susan rummaged under the counter and pulled out a box. Agnes sat down on it and turned back her coat collar. A pearl necklace with a diamond pendant gleamed against her throat. And while they ate crackers and cheese, Davy saw Susan lean across the counter and look into the eyes of Jake Raines.

"See what he's got for *his* girl?" she asked, and nodded toward Agnes. "See that necklace? I think I'll catch *me* one of them swells."

"If I was to git you one of them gee-gaws—?" asked Jake.

"Then we might talk business, Jake Raines!"

Half a mile below Gant's Store a road, disused and almost obscured by pine needles, turned off the main road through a thicket. Here Agnes reined up her horse.

"What a tempting trail!" she cried. "Davy, can't we go this way?"

Girard turned and gave the boy a look that men understand—a look partly indulgent, mildly rebellious, slightly helpless, a look that a Frenchman would translate into a shrug of the shoulders."

"Might as well," grinned Davy. "Thar's birds out thar too."

Their chivalry was rewarded. An eighth of a mile through the woods they came out into a straw field. In the middle of the field the pointer stood rigid, his head high, his slender tail straight out.

[CONTINUED ON PAGE 38]



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Do You Like Fresh Greens and Flowers in Winter?

By Eva Belle Cronk

IF YOU haven't the kitchen window-box habit you can easily acquire it. It gives you all the fun of gardening, and at the same time produces herbs for flavoring stews and sauces, greens for salads and garnishing, and flowers to satisfy your esthetic taste.

You will need a box 14 inches wide, 6 to 8 inches deep, and as long as the window. A few holes should be bored in the bottom, and below the box should be placed a flat pan to catch any surplus water that may drip through. In the bottom place a one-inch layer of coarse material, such as cinders or bits of broken brick. On the top of that is placed the soil, which should consist of one-half common garden loam, one-fourth sharp sand, and one-fourth well-rotted manure, well mixed together.

If you have space for but one kitchen window box, a practical arrangement is as follows: Nasturtiums around the edge of the box, next to this a row of parsley, and in the center of the box, thyme, sage, and summer savory.

The Dwarf or Tom Thumb varieties of nasturtium are excellent for the window box, since they are low-growing and blossom profusely. The nasturtium blossoms and leaves may be used for salads and garnishing, as well as for table decorations.

Perfection, Moss Curled, and Double Curled varieties of parsley are recommended because they are the compact-growing sort, ornamental enough to be utilized as a border. Parsley should be planted rather thickly to insure good germination. When the plants are well up, pull out the weakest to allow the others a better chance for growing strong and healthy. If you want fine, showy plants, thin to three or four inches, but if you just want "parsley," that will grow with little or no care. Parsley holds first place among garnishing plants,

[CONTINUED ON PAGE 41]

Sweater With Striped Border



A SWEATER is both warm and attractive in the cold winter months when the house is chilly, and also makes a charming wrap for the coolish spring days. Directions for knitting the model shown above will be sent to you on receipt of four cents in stamps by the Fancy-Work Editor, Farm and Fireside, Springfield, Ohio. Order No. FC-122



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Cupid Astride a Mule

[CONTINUED FROM PAGE 36]

"Birds!" cried Girard. "Now for sport. Get down, Agnes, get down! You can break clay pigeons—you must bring down a brace."

He helped her from her horse, and they hurried toward the dog, man and woman with guns ready at their hips, Davy bringing up the rear. The sun threw the shadows of the woods out into the fields. Where the dog stood it was bright and golden.

The pointer rolled his eyes toward them, then gently lifted his front paw. There was no sound but the brush of their boots through the straw. Somewhere not far from the dog's nose a dozen startled quail were huddled.

"Ready, Agnes?" asked Girard quietly.

"I guess so," she laughed with a little nervous intake of the breath, "only it seems a—"

"Hie away, Jess!"

The dog plunged forward. The birds arose with a sharp whir and Girard's gun barked twice. Two birds dropped from the whirling group. The pointer brought them fluttering in. Girard turned to Agnes.

"Why didn't you shoot?"

"I—I couldn't—the poor little things!"

"O Lordy!" said Davy, and caved in.

Girard looked down at her. The sun shone full on her face. It was flushed with excitement and embarrassment. Her breath came quickly. She glanced up at him like a child. At the whimsical tenderness of his gaze, she blushed scarlet and turned to Davy for relief.

Davy's eyes were on her gun—beautiful, perfectly balanced, accurate, with shining walnut stock and leather shoulder pad, all useless, worthless, in the hands of a woman! The boy's heart went out to the gun as if it were a thing of feeling.

"Davy, do you want the gun?"

Davy staggered. Did he want the gun? Ever since he was old enough to know desire he had craved above anything in earth and heaven a gun. His heart pounded in his ears. He was incapable of speech.

"It's yours, Davy!"

"Mine?" he gasped.

"Take it, Davy." She held it out to him, balanced in her dainty hand.

Reverently he took it, breathing deep. For gifts that raise us to the seventh heaven of happiness we do not utter thanks. He could only look at her, his heart in his eyes.

"Great!" cried Girard. "Great! I wouldn't take a thousand dollars for this!"

DAZED, speechless, the boy returned with the others to their mounts. Closely, as they rode on, he hugged his weapon to him. No rabbit would ever again with impunity stop in the road in front of him, no squirrel bark saucily at him from a tree, no wild turkey raise his slender neck above the bushes and cry, "Put! Put!"

He was hardly conscious of the others in front of him. He half knew that they were talking low, and now and then stealing glances back at him. He knew he loved the goddess whose hand had been reached down to him. But most of all he knew he owned a gun. The sublimity of his blessing almost overcame him. He was riding on air, instead of on the back of old Pete. The halting of the beast brought him back to reality. The others had halted also.

They were at the side of a hunting lodge. It was built of unhewn logs, with a rustic porch in front and a big chimney at one end. They rode around to the porch. It overlooked the sweep of level fields that stretched to the swamp. The sun, a ball of blinding brass, hung an hour and a half high above the long hazy line of the swamp, and shone aslant across the silken, tan, unbroken fields of broom straw. The place was as silent as a wilderness.

"What is this, Davy?" asked Agnes.

"Sunset Lodge, they call it. Some Yankee built it two years ago, an' ain't never been back since."

She jumped down from her horse, went around the lodge, stood on tiptoe, and peered in at the windows. Then she faced them, her cheeks aglow.

"I think I would *love* to live there!" she said.

"Well, if I sell my book," said Girard gravely, looking down at her, "I'll buy this place."

"It wouldn't cost much," said Davy eagerly. "The man that built it lef' the key with Sam Long—tol' him to rent it or sell it to anybody that would take keer of it. It's all furnished—ready for folks to go into."

Agnes turned quickly away. She ran up the steps and stood on the porch in the flooding sunlight, shading her eyes with her

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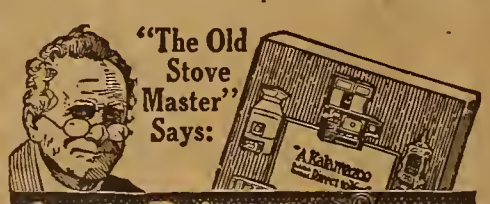
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hand, her gaze far over the straw fields, over the misty line of the swamp beyond, into the glowing heavens. Silently, like clumsy intruders in Fairyland, the man and boy watched her.

The mood was broken by a shout from Davy.

"He's set! Out thar in the flat! Ol' Jess!"

Far out in the straw stood the dog, the sun gleaming on his collar. Girard and Davy jumped from their saddles. Agnes handed over her shells to the boy.

"I'll stay here," she said, "and wait for you."

They hurried toward the dog. Four shots instead of two started the echoes of that amphitheater formed by the encircling woods. Eagerly they followed the scattered birds, Girard sticking two more in his game pocket as he strode. Among the single birds Davy brought down one, and yelled in the abandonment of his joy. A second covey carried them farther away. Another flew at right angles to their route into the outer edge of the swamp. When last they looked back Agnes was still standing on the porch of the lodge.

One covey followed another, and the whir of single birds was in the air. Girard got a dozen, Davy two or three. The exhilaration of the hunt carried them on and on. They forgot the passage of time.

The sinking of the sun above the swamp and the sudden darkness in the woods brought them to themselves.

"Agnes!" said Girard.

"I was just a-goin' to say the same thing!"

Girard glanced at his watch.

"We've been gone over an hour!"

They pushed hurriedly through the woods and reached the open. Across the bottoms they could see the lodge.

"Davy, she's not on the porch!"

"Better hurry!"

A damp chill rose from the marsh and swamp. A few little birds flew low with home-coming chirps. They reached the lodge. One horse and a mule waited for them with pricked ears.

Girard looked at Davy. The man was panting hard.

"She's gone!"

"We ought not to have forgot her, you and me. Women's skeery."

They climbed into their saddles.

"Oh, I know!" exclaimed Girard. "Fleming found her and she rode back with him!"

"That's it!" cried Davy gleefully. "I knowed all the time it was all right."

THEY galloped through the stretch of woods into the main road. At a fork Davy pulled up.

"This is whar I turn off," he announced. "Uncle Ben'll be a-waitin' for me." He did not add "with a hickory," but in anticipation he already felt the sting.

"Hold on!" Girard laid a detaining hand on Davy's arm. "Who's this coming?"

In the afterglow a man was riding toward them. As he came closer they made out Dr. Fleming. The faces of the man and boy went pale. Dr. Fleming drew up and looked at them sternly.

"Where's Agnes?" he demanded.

"Haven't you seen her?"

"No—she went out with you, Girard. I supposed she would come back with you!"

In the dusk the men eyed one another. In their faces Davy read the fear that was in his own heart.

"You haven't heard anything of her?" Girard's voice trembled as if he were cold.

"No, I say—not a word!"

Girard looked at Davy. In the growing darkness the man's face was white, his eyes had dark circles under them. Far down the road a negro was going home, singing a wailing melody.

"Whar do you reckin she kin be?" asked Davy.

Girard shook his head.

In the gathering darkness the three drew close together. The pointer crouched at the feet of Girard's horse. A red streak across the west was all that remained of the day. The silence was absolute.

"She has probably got back to the club by this time," said Girard.

"I came directly from there. I would have met her."

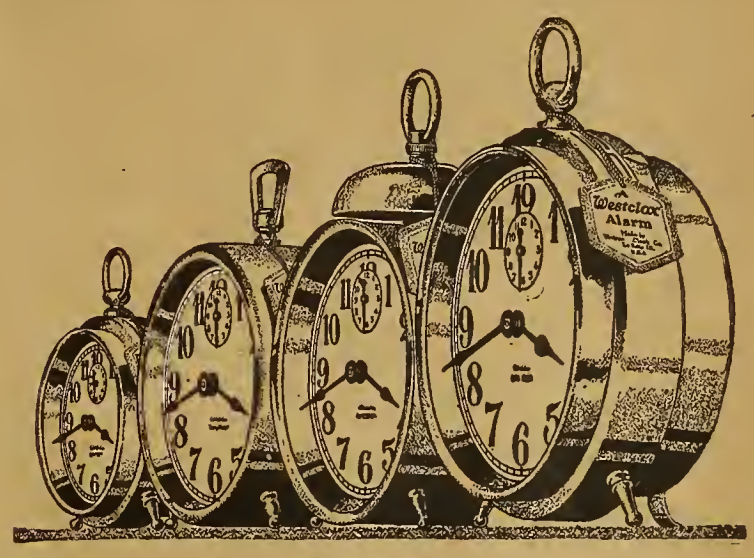
"She might have taken some other road. Davy, where is the nearest phone?"

"Gant's Sto'."

"We'll go there."

The store was dimly lighted by a smoky oil lamp. Two or three men stood about the glowing stove. One of them was a stalwart, hawk-faced young lumberman, Sam Long, the most worthy of Susan's admirers. Jake Raines was nowhere about.

[CONTINUED ON PAGE 48]



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Suggestions for the Christmas Dinner

By Edith M. Updegraff

ALTHOUGH I don't believe in having my Christmas table laden with several kinds of desserts and an outrageous variety of vegetables, I do try to have something a little unusual. I like to decorate my table prettily, and plan cunning favors, so that the eye as well as the appetite will be appealed to. Carrying out some color scheme makes the Christmas dinner so much more attractive, and will cause very little extra trouble. Red and white, it seems to me, is the most appropriate color scheme for the holiday season.

I serve my salad as an extra course. It is much nicer and scarcely any more trouble. There are many salads that are inexpensive to make and yet so delicious.

After a heavy dinner, such as the Christmas feast always is, we like a light dessert, and cake, or a pudding, rather than a rich pastry. A chilled dessert is easily prepared, and nothing is nicer. We finish up, of course, on raisins, nuts, and candy.

I usually plan my dinner so I won't have to prepare it all in one day. I make the salad dressing and cake, and prepare as many of the vegetables the day before as possible, for I do not like to be hurried with this dinner. Most of us who do our own work know that this preparedness makes things easier.

Here are a few recipes I have found especially popular with my family:

Duchess Potatoes

2 cups cold mashed potatoes
1 egg
¼ cup hot milk

Mix the mashed potatoes with the beaten egg; stir in the hot milk, season, and mix thoroughly. Place in a buttered baking dish, and brown in the oven.

Escalloped Corn

1 can corn
3 teaspoons butter
½ cup milk
1 egg
Salt
¼ cup crumbs
¼ chopped green peppers

To the corn add the beaten egg and milk; add butter, season, and mix in the chopped green pepper. Cover with crumbs, and bake in a buttered baking dish.

Stuffed Celery Hearts

Take small celery hearts, clean and let stand in cold water. Mix up cream cheese with chopped pimento, and add enough cream to make soft cheese. Season the cheese, and stuff it in center of celery stock. Chill and serve when firm.

Pear Salad

Drain and chill canned pears. Place on a lettuce leaf, garnish with nuts and cherries, and serve with whipped cream dressing. A small portion of cream cheese may be added to salad if desired.

Red Apple Salad

6 apples
2 cups sugar
1 cup water
½ cup chopped celery
¼ cup chopped nuts

Wash, pare, and core the apples. Make a syrup of sugar and water, and add enough coloring to make a deep red color. When the syrup comes to a boil, drop in the apples. Turn apples over and over, and let cook until tender and soft. Take out of syrup and caill. Place the apples on a lettuce leaf, and stuff with celery. Serve with whipped cream dressing, and garnish with nuts.



Photo by Paul Thompson

Now come, dolly Mary, let's go to bed,
For didn't you hear what Mama just said?
That good old St. Nick with his pack full of toys
Will visit the houses of nice girls and boys
Who don't make any fuss about staying up late
When they're sent off to bed at a quarter to eight.

Cherry Sponge

1 tablespoon gelatin
1 cup boiling water
¼ cup lemon and orange juice
¼ cup cold water
½ cup cherry juice
½ cup sugar
3 egg whites

Swell the gelatin in cold water and dissolve the sugar in fruit juices and remaining water. Stir in mixture, cool until it tnickens, beat thoroughly, and add beaten egg whites. Place in wet molds. Serve with whipped cream, and garnish top with cherries.

Steamed Suet Pudding

½ cup suet
½ cup molasses
Salt
½ teaspoon cinnamon
¼ teaspoon cloves
¾ teaspoon soda
¼ cup raisins
½ cup sour milk
1 cup flour
¼ cup currants

Chop suet fine. Wash and dry the raisins and currants. Cut the raisins; sprinkle suet, raisins, and currants with flour to keep them from settling. Thoroughly mix the molasses and milk, then add fruit and suet. Sift the flour and spices and add to milk. Pour into buttered molds, and steam for three hours. Serve hot with hard or cream sauce.

Date Pudding

½ pound dates
5 egg whites
1 cup sugar
1 pound nuts
3 teaspoons baking powder

Stone and chop dates. Shell and chop nuts. Beat the egg whites until stiff and dry. Mix the baking powder with the egg whites, and add the sugar. Fold the chopped dates and nuts into the mixture. Pour the mixture into a shallow baking tin, and bake for twenty or thirty minutes.

Animals and People—Good Enough to Eat

[CONTINUED FROM PAGE 35]

print letters with the aid of a toothpick and melted chocolate. Dominoes are easily achieved by cutting wafers in half and dipping them in chocolate, then marking the dots with white icing.

Representations of faces or figures never fail to arouse amusement. Round, flat mint candies lend themselves to this form of decoration, and may be used as a sweetmeat alone or for garnishing other dishes. Use a toothpick and chocolate for marking the features.

A novel way to serve the ice cream is in the form of a clown's head. For this an ice-cream cone is set jauntily on the top of a ball of cream, and features marked on the latter with small chocolate candies for the eyes, strips of dates for nose, and a piece of cherry for the mouth.

A snow man is also popular. One delectable one I saw at a party was made of two balls of ice cream, one on top of the other, the smaller one for the head and the larger for the body. The arms were of stick candy, there was a row of red candy buttons down the front, cloves formed the eyes and a cherry the mouth.

By the aid of fine wire all sorts of funny little creatures may be fashioned. With almonds for feet, figs for the body, marshmallows traced with chocolate features and hair for the head, peanuts and raisins for arms and hands, and a piece of fig for a hat, a very good-looking and equally good-tasting little fellow may be brought into existence. It will really be a very hard matter to decide whether to keep him or eat him.

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THE SPRAGUE PUBLISHING CO.
No. 143 American Bldg., Detroit, Mich.

The Basket Habit

[CONTINUED FROM PAGE 33]

cranberries, and send it to the relatives in the city.

Gifts of this kind will be sure to be appreciated, and parcel post makes the sending of them an easy matter. A market basket filled with a variety of fruit and vegetables can be made most attractive. These things that the people in the country value so lightly are luxuries to the city dwellers, and a basket filled with firm, clean beets, carrots, turnips, parsnips, apples, and so forth, would be a welcome gift in any home. Jars of jelly or home-made preserves or pickle are more attractive if packed in a basket that has been painted, and a dainty bow of ribbon, or a bunch of wild or cultivated flowers, or even a bit of green from the woods, adds to the effectiveness of the gifts.

A basket filled from the woods, with moss, berries, jack-in-the-pulpit, or any of the many beautiful things that can be found there, will carry to the city dweller a beauty that any other gift would not have at Easter time.

The big or little basket has many wonderful uses, both practical and decorative, whether they are of the ten-cent variety or more expensive. Odd ones can be picked up and made into work bags, with silk and ribbon tops, or they can be used to hold plants. In fact, there are many unique and artistic uses as well as practical ones for the simple, inexpensive basket.

Make Your Broom Serve Double Time

By J. T. Bartlett

TO HAVE a broom last its full quota of days it must never be left standing on the straw. A notch cut in the handle near the top around which a string can be tied to form a loop furnishes an easy means of hanging the broom to a nail so that no part of it touches the floor. When wear has caused it to become one-sided its efficiency can be restored by clipping and pulling out the two bottom rows of stitching and then, after having soaked the broom in hot water, trimming the straw to a straight edge with a pair of sharp scissors. Though somewhat shortened, it will perform as good work as previously. Later, when once more it has become lopsided, its days of usefulness can be prolonged by trimming the straw to a point, in a shape of a triangle, making a very efficient cleaner for corners and around the legs of heavy furniture and parts of machinery not easily accessible in the broom's original square-cornered shape.

Do You Like Fresh Greens and Flowers in Winter?

[CONTINUED FROM PAGE 37]

presumably because of its ease of culture and its beauty.

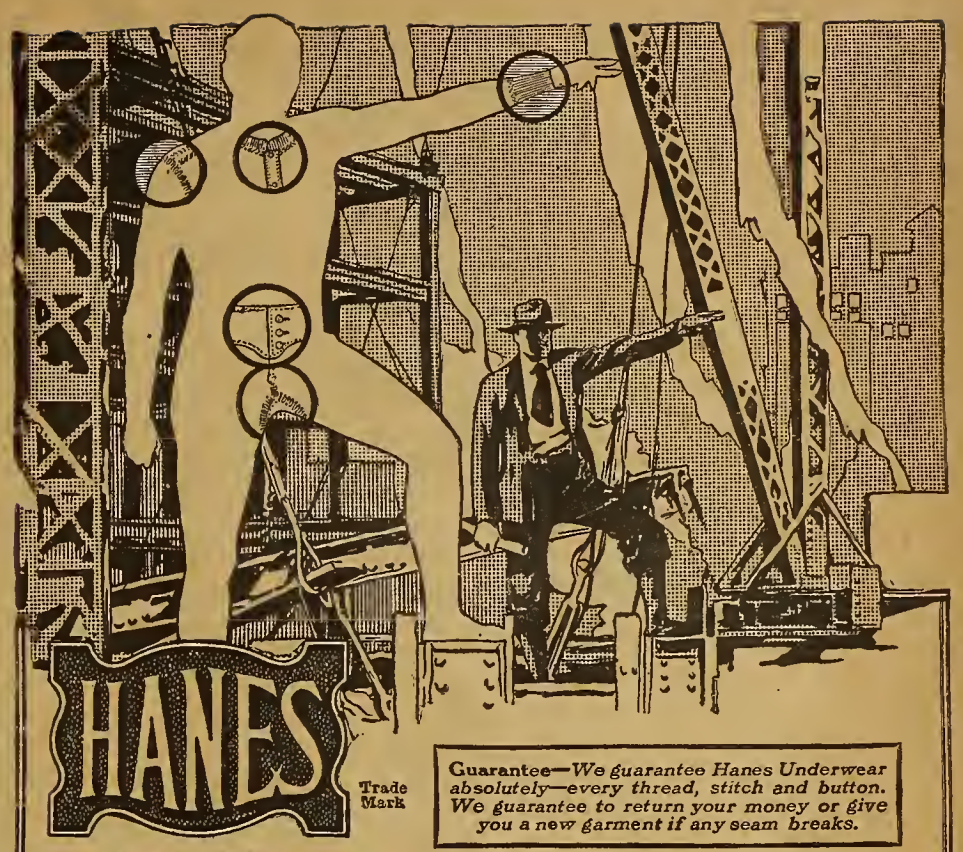
Thyme, sage, and summer savory are the sweet herbs necessary to the housewives for flavoring meat dressings, meat loaves, and the like. One or two plants will be sufficient to supply the wants of the average family. Cut the herbs as often as is necessary to keep the box looking attractive. These may be dried for future use.

If you are fond of mint sauce with your lamb and mutton, a plant or two of spearmint should also be included in your selection for the kitchen window garden.

The essentials for making window-box gardening a success are sunshine, fresh air, plenty of water, and that a temperature of from 40 degrees at night to 60 degrees during the day be maintained. Keep a reliable thermometer near the box, and consult it frequently during the day.

Fresh air must be admitted whenever it is possible to do so without injury to the plants, but cold drafts should be avoided as you would avoid a pest. In sunny weather be sure to open the window from the top before the heat of the sun, by concentration on the glass, becomes too intense for the young plants. The admission of fresh air will counteract all danger from that source. On severe nights newspapers may be placed between the window and the plants.

Since it is possible to have the proper growing temperature for the kitchen window garden, seeds may be planted at any time; however, you will derive more satisfaction if they are planted so that you can have something "green" from your garden during February and March.



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Better Babies

IT IS with the greatest pleasure that I take this opportunity to write you a few words about the great help and consolation that the Better Babies Bureau has been to my wife and myself.

It is only through expressions of gratitude from people who have followed your advice that you can tell whether or not your page is "going over," and I hasten to assure you that of all the conflicting suggestions and advice we received during the time we were expecting our little "better baby" we pinned our faith exclusively to what the Better Babies Bureau said on any and every subject.

It may seem strange, but it is nevertheless the fact, that it is impossible to obtain information concerning what is to be expected and what is to be done in emergencies. People who have not had children, usually have the most advice to give concerning them, the value of which is in direct proportion to their experience in the matter. People who have had children seem, *ipso facto*, to become members of a closed corporation, pledged to absolute secrecy in these matters, and when asked a perfectly civil and direct question, the answer of which may be very simple and may save a newly married couple many a sleepless night of anxiety, they usually think it is a good joke to assume an air of superiority and make some broad statement such as "you will find it all out in time." Or they give such a haphazard and ridiculous answer that your faith in everyone is shaken to the roots. It being impossible to bother the doctor with every little question which came up, questions which to him would seem foolish, we resigned ourselves to our fate, and resolved to ask no more questions of anyone, and simply let come what might.

Then suddenly into this vale of despair and anxiety there crept a little sunbeam. That little sunbeam was the all too short page of the Better Babies Bureau. Here at last did we find a sensible discussion of and sensible information on the most important topic that has ever appeared in the world. We clutched at the straw. We wrote for the letters of the Expectant Mothers' Circle, and when we received the first three together we found that we had at last discovered where we could get the exact and truthful information that we wanted.

After that we did not have to ask any more questions. As we would read over each new letter, we often said to each other that it seemed as though the letters had been written to us alone, as they anticipated every event with the utmost certainty, and gave us the information as to what should be done in every contingency that arose.

We followed your advice implicitly until the letters stopped, and we have now the dearest little "better baby" in the world, always smiling, always happy, and absolutely no trouble.

The letters that you have sent us have now been passed from one to another of our friends who have been in the same situation as ourselves, and, thumb-marked and dirty though they be, they are still doing good work.

We are recommending your column to all of our friends, and we take this opportunity to express to you our gratitude and thankfulness for the bright sunshine of knowledge and dependable information that you gave us.

W. H. W., New York.



I don't know what a grouch is

YOUR last monthly letter came just a few days before Janet was born. I have had the enclosed card ready ever since I returned from the hospital. It has been here in my desk patiently waiting.

I am ashamed to think I have not written in so long a time to acknowledge receipt of and to thank you for the Better Babies letters. Not only did I like the suggestions contained therein, but the little personal note they always seemed to contain pleased me most of all.

Janet's coming was an event to which we looked forward with much happiness. She is the first baby in our home, and she is surely a "better baby." If there is a healthier, happier, better baby anywhere we'd like to see her!

Enclosed please find stamps for 50 cents for the letters of instruction on the care and feeding of babies. May I have them all from the beginning? I have wished I had them a number of times.

Mrs. M. N. A., Massachusetts.

MY BABY boy—my first child—is now nearly two months old, and I wish to thank you for the letters received from the Expectant Mothers' Circle. Although I had a very fine nurse and doctor, and went to a hospital, those letters were of the greatest benefit to me imaginable, and I know helped me to have the easy time I had, and the *fine* boy. I have been singing the praises of the Bureau ever since.



They grow 'em like this in Pennsylvania

Now I wish to join the Mothers' Club, and am enclosing 50 cents in stamps for all literature and monthly letters for the coming year. I feel sure they will give me as much pleasure and benefit as did the letters before.

Mrs. G. C., California.

What the Better Babies Bureau Is

And how to secure its help

THE EXPECTANT MOTHERS' CIRCLE: Any woman eligible may become a member, receiving each month a letter of advice on the care of herself and the preparation for her baby. Several practical little pamphlet circulars showing designs for maternity dresses and a common-sense layette are some of the helps sent with the letters. No matter at what period you enter, everything from the first month will be sent. No mention of the Better Babies Bureau is made on the envelopes in which the material is mailed. Enclose a self-addressed envelope with *Fifty Cents* in stamps, for postage, *and state what month you expect your baby.*

THE MOTHERS' CLUB: Every mother of young children is eligible. Pamphlets, together with monthly letters of instruction on the care and feeding of babies *under one year of age* (covering such subjects as colic, constipation, weaning, teething, etc.), will be sent to any mother who sends *Fifty Cents* in stamps and states the age of her baby. There are also leaflets giving diet lists, and other helps for babies from one year of age to three years. This literature is all included in the Mothers' Club's monthly service, but if the letters are not desired the additional literature will be sent for *Ten Cents*. A self-addressed stamped envelope will bring a prompt reply to every inquiry. Address all inquiries to

BETTER BABIES BUREAU

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Journal of Agriculture	.75
National Stockman and Farmer	1.25
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Reliable Poultry Journal	.80
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GOOD TO JANUARY 1, 1920

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F. F. Dec. 196



It's not fat—it's EGGS you want

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Dr. Hess Poultry Pan-a-ce-a

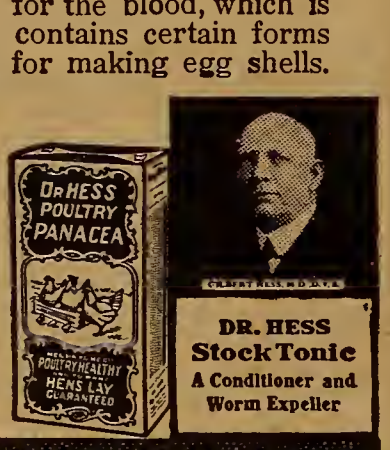
It contains *Nux Vomica* and *Quassia,* the best nerve, appetizing and digestive tonics known to the *Materia Medica*—tonics that promote a hen's digestion—tonics that tone up the dormant egg organs so that the proper amount of food goes to egg production, and not all to flesh, and fat, and laziness, when it's action, and eggs you want.

Pan-a-ce-a supplies the additional iron for the blood, which is essential to the speeding up process. It contains certain forms of lime that supply the needed material for making egg shells.

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Dr. Hess Instant Louse Killer Kills Lice

Who Buys Your Chickens

TWO things are essential if the farm would deal profitably with the local poultry buyer. One is to know what constitutes a reasonable price, implying a knowledge of market conditions; and the other is a take-it-or-leave-it attitude. This last is very important. If the buyer knows the owner must sell, or intends to sell anyway, he will pay his own price—and obtain his exorbitant profit.

A New England buyer 100 miles from Boston, who handled most of the live poultry shipped from a territory 15 miles square, called at a farm in early summer. He offered 16 cents a pound. "It's all I can afford, Jim," he mumbled apologetically. "I lost $10 on the last hens I shipped." Country buyers are much prone to such talk. Jim, however, was a wide-awake fellow. He took a daily newspaper and several farm papers. He was on the post-card buying-price mailing list of a live poultry company. He followed markets closely. He knew that Boston at that time was paying from 24 to 25 cents for old fowl. He knew further that from his town it cost at least two cents a pound to ship a crate of hens to Boston and get the crate returned.

Moreover, he realized that 25 cents was the top market price, and only large, fat hens would command it. His hens did not fall in this class. He also knew that hens shrink considerably when sold to Boston. They were weighed with empty crops, whereas the local buyer would weigh them just as caught in the barnyard.

"I'll sell for 19 cents a pound," he said. "Take it or leave it."

The buyer took the hens at 19 cents. The farmer was satisfied. There were only a few of them, too small a number for the owner to ship to advantage. It was the busy crop season, too, and haying pressed. The buyer paid cash, and departed with the hens.

Farm poultry producers annually provide many thousands of local buyers with a good living. The average buyer pays as low a price as he can. It is part of his business to realize on the farmer's lack of current market information. But the buyer is keen after business, for he must handle large numbers to have a satisfactory total net income. He will, if forced, be content with a reasonable profit. It must be remembered that the local buyer is a middleman, shipping to receivers any farmer can ship to, and less must be expected of him than if live hens were sold direct.

J. T. B.

Ever-Filled Chicken Trough

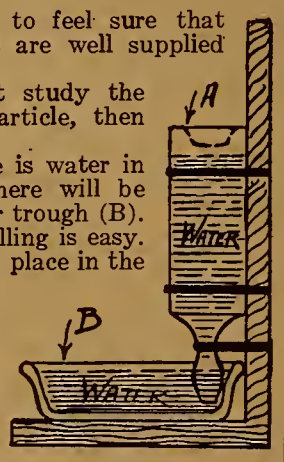
DO YOU want to feel sure that your chickens are well supplied with water?

If you do, just study the sketch with this article, then make one like it.

As long as there is water in the bottle (A), there will be water in the pan or trough (B).

The system of filling is easy. First fill the bottle, place in the holder, then turn the whole thing over quickly.

As long as water remains in the bottle, the level of the water in the trough will be slightly above the neck of bottle as shown.



Such a scheme as this insures good fresh water for the poultry, saves the help time, and is worth the slight labor in making.

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WHETHER you are a poultry specialist, a farmer raising it as a side line, or a beginner in this interesting game, you will frequently have puzzling problems to solve and doubts as to which are the best methods to follow. Instead of becoming discouraged or going ahead in the dark, why not let our Poultry Expert try his hand on your particular problem. He is always glad to help. Many poultry raisers write to him every month. State your questions in full, and address Victor G. Aubry, 381 Fourth Avenue, New York City.

THE EDITOR.

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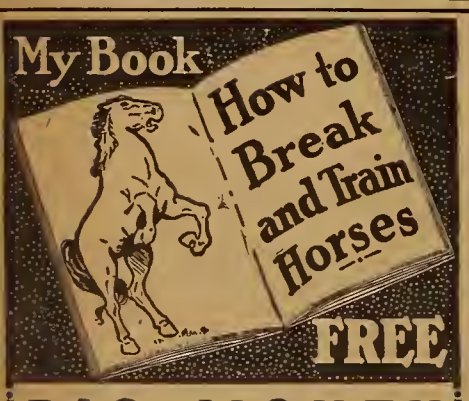
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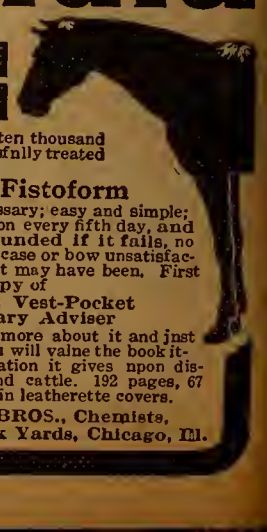
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Asparagus in Winter

DO YOU know you can have fresh asparagus all winter—from the field, the hothouse, or the cellar? I didn't. I had assumed that greenhouse men could grow it, but I didn't know it could be forced in the ordinary cellar. The Department gardeners say it is possible and practicable, although as yet it is not generally practiced in this country. It is a method of much importance in Europe. You can either build rough forcing houses over the rows in the fields or lift the asparagus crowns from the field and place them under greenhouse benches, hotbeds, or in cellars. The latter methods are the commonest.

The crowns are plowed or dug up late in fall, when the soil is moist so that the soil will adhere to them. They are left exposed in the field until frozen, then they are covered with litter or removed to a shed to prevent alternate freezing and thawing, which is harmful. The crowns are then stored in a cool cellar or pit and bedded, as needed to supply a succession of shoots, in two or three inches of loose soil on the floor. They are covered to the depth of an inch, and the soil is kept moist. Shoots can be cut about six weeks after bedding. For white shoots the light should be excluded. As soon as the crowns become exhausted they should be removed and a new supply put in. For the first ten days after the crowns are placed for forcing the temperature should be kept rather low—45 to 50 degrees F. After this 55 to 60 degrees is most satisfactory, although a higher temperature will not be injurious. Try a bed in the cellar this winter. H. S.

Do You Farm "Fast" Enough?

[CONTINUED FROM PAGE 11]

doing so more profitably than when average methods are used. Whether we like it or not, agriculture is not only becoming more artificial in character but also is responding to a speeding-up process, and further developments must be expected.

That is why good farmers are discarding methods that were good enough in former times but that will not stand the competition of to-day. To exchange methods which have carried us along thus far, and adopt new ones which only a few have tried, is not an easy decision. Yet when you consider that at a recent county fair every farmer came in a motor car—there was not a horse-drawn rig on the grounds except racing carts—sweeping changes are not impossible.

Scrub and mongrel breeding stock is obsolete in the United States. The use of good pure-bred sires will mean a better quality and greater uniformity of young stock even in the first generation. Pure-bred females are desirable but not essential, because if none but pure-bred sires are used the offspring becomes one-half full-blooded, then three fourths in the following generation, then seven eighths, and so on up to a very high grade.

Prevention and prompt control of crop pests and animal diseases are a necessary part of profitable farming to-day. There is a known method of controlling practically every crop and animal disease.

It pays to use good seed, good live stock, and good equipment.

Neglecting to feed pregnant live stock adequately is an important cause of weak, unthrifty, and slow-maturing offspring. The proper feeding of animals begins with the feeding of the parent stock, especially the mothers. Strong, sturdy young stock means a greater proportion raised, and more rapid maturity.

Study your emergency crops. Prompt action may prevent heavy losses in stock, money, and time. Emergency crops are now being used by resourceful farmers to prevent losses formerly considered unavoidable. A Kansas farmer recently carried a herd of cattle through the winter economically because he grew millet and sorghum after rains had practically destroyed his corn, wheat, and hay.

The various incidents mentioned may not apply everywhere, but they illustrate the principles involved, and you, as a resourceful reader, will find methods that apply to your own problems.

Brains have always paid in agriculture, but they are going to pay more in the future. A quick turnover offers opportunity for better returns from the same investment, and the way to get that turnover is to develop plans for producing more in less time and producing more economically.



The Start of a Good Roof

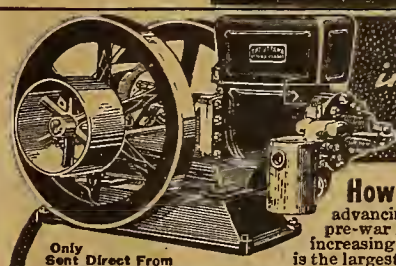
Your roof is well begun when you tear the wrapper from the first roll of Ru-ber-oid Prepared Roofing. Then when its last nail is driven you can bid good-bye to your roofing worries.

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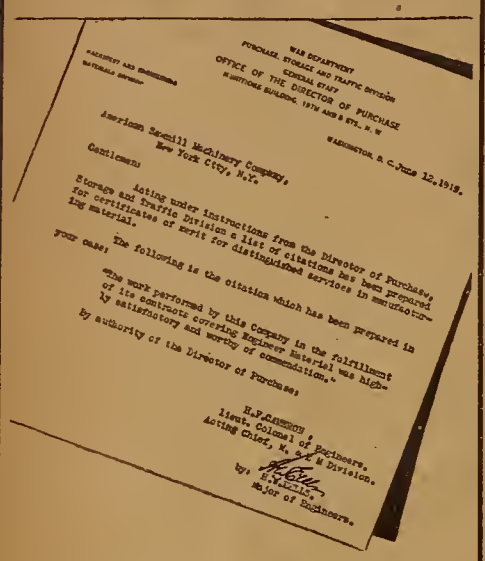
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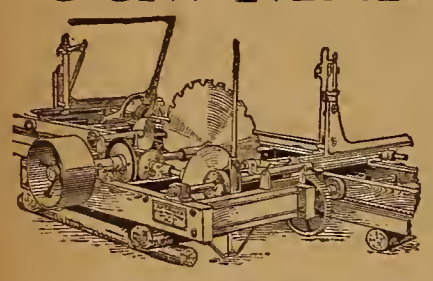
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These Ideas May Help Cut the Cost of Production on Your Farm

By John Roberts

WITH both eyes open for big and little ideas on how to cut some of the corners of expense in your farm production, I looked over Uncle Sam's Department of Agriculture again the other day to see what the month had brought forth. I decided to make this "cheaper production" month on this page in FARM AND FIRESIDE, rejecting anything that wasn't a biff at the high cost of producing. I said I didn't care if somebody had discovered that the jimson weed was superior to alfalfa as a forage plant—I wouldn't write a word about it unless he could show me that it meant a very early drop in the cost of putting farm stuff on the market.

One result in feed substitution impressed me as being striking. The records from six cow-testing associations where alfalfa formed a large part of the dairy ration was compared with the records of eight other associations where alfalfa or other legumes were fed sparingly. The results showed how alfalfa could be substituted for a large part of the grain at a marked saving in cost. For the alfalfa-fed cows the average income over cost of feed was $73, while these figures reversed—thirty-seven dollars—represented the average income over cost feed for the grain-fed cows. In the alfalfa district the cost of grain was 41 per cent of the total feed cost. The average milk yield of the alfalfa-fed cows was 6,805 pounds, and the average yield of butterfat was 281 pounds. In the other district the average milk yield was 5,234 pounds, and the average yield of butterfat was 238 pounds.

The Department's report goes on to say that the alfalfa-fed cows may have been better cows, and the climate may have been better adapted to dairying, but as both districts are favorably known for their dairy products it may be assumed that the cows were of good quality and well cared for in both districts. It seems fair, therefore, to conclude that the higher production and greater income above feed cost of the alfalfa-fed cows was due largely to the feeding of homegrown legumes. The Department suggests that on those soils not adapted to legumes it may pay to add lime or manure or whatever else it lacks in order that the dairy herd may have an abundance of this more profitable crop.

122 Per Cent on Sheep

Eleven hundred and fifty lambs reared and marketed in one season from 938 ewes—a 122 per cent increase! Twelve farmers who are members of the Baird Mills Lambing Club of Tennessee did that this year—a record not often equaled. How did they do it? I list the economic and agricultural secrets below, but in addition to these there is the all-important factor of personal attention to the flock at lambing time. Any sheep raiser will tell you that is a prime essential. It means hard and disagreeable work to be a 122 per cent sheep farmer. It means foregoing your bed on many a cold night when the lambs are coming, but wet nursing in the fold means saving both members of twins or all three of triplets instead of only one, two, or perhaps none.

The man who is considering the sheep business may as well realize that at the outset. And he should know, too, that it is a job rarely satisfactorily accomplished by proxy. Here are the other means, according to the Department's sheep specialists, for batting 122 per cent, as the Tennessee sheepmen did:

Eliminating all undesirable ewes in the fall prior to the breeding season, providing adequate pasture and a little supplementary grain feed for the breeding flock, proper feeding during the fall and early winter, plenty of exercise for the ewes every day, and roomy, light, dry, and well-ventilated quarters for them.

A Sunshine Hog House

The same thing about care at birth and good quarters is true, and a little more so, of pigs. Too many of us still have the notion that a pig or a hog can stand anything. Our hearts warm up, and then our sheds, over a poor little wet lamb that has just arrived on earth on a cold March morning, but if anybody ever had the same feeling about an infant pig—well, a few understanding ones have had it; most of us haven't. And yet no animal on the farm, federal swine men tell me, requires more protection from the cold; none so needful of a good bed and sunshine.

The horse and the cow have good hair coats. The calf and the colt even are provided with fur wraps. The hen's feathers are the best kind of protection, while the sheep is "all boun' roun'" with a woolen sweater. Almost nothing comes between the poor pig and the weather.

This is a good time to reform, with hogs at present prices. Time to put the hogs up right in anticipation of the high-priced



A Plain Appeal to Your Pocketbook

THE National Tuberculosis Association is conducting a campaign to check the spread of tuberculosis. This disease has killed 150,000 Americans last year. The fight is financed chiefly through the sale of Red Cross Christmas seals.

Tuberculosis can be prevented and cured. The money from the sale of these stamps is used to teach people how to prevent and cure it. Every Red Cross Christmas seal you buy and use on a letter or package is a penny's worth of prevention and cure contributed by you. They are on sale in your neighborhood or the nearest town. THE EDITOR.

litters to come next spring. And my argument won't lose force if hogs have dropped considerably by the time this is printed. Hogs at any price will pay good returns on comfortable quarters—pay in larger litters saved and in quicker maturity. No building on the farm will pay for itself so quickly as a good hog house.

For instance: The government specialists say that good hog men raise an average of seven pigs to the litter; many surpass that record. Yet the general average raised is about four to the litter—the difference largely due to housing. Get Farmers' Bulletin 438, on Hog Houses, from the Department, and look over the many house plans described and illustrated.

Don't make the mistake of the Nebraska farmer—and thousands of others have done the same thing—who decided he would treat his hogs right. He built a hog shed 24 feet wide and 84 feet long. It was one of a set of buildings on his highly improved farm that probably cost $14,000. In this hog house he put not one window or ventilator. Alley doors and a few hog doors were the only means of admitting air and light. A more unsuitable structure scarcely could have been devised.

The record of his failure with this house I could not get, but the Department has the results from a similar one. They show a loss of 90 per cent of the early pigs in some seasons, mostly from thumps. The loss in a single season would have more than paid for a good building. No piggery is fit for the purpose unless it admits direct sunshine on the floor of every pen at the time the pigs are farrowed, furnishes plenty of fresh air, and provides for exercise in the open air. Dryness, sunshine, warmth, fresh air, freedom from drafts, and exercise—these are the six things your new hog house must provide.

Some day an enterprising county agent is going to stand up in a meeting of hog raisers and say:

"Gentlemen, we'll open the meeting by singing, all together, that old Sunday School favorite, "Let a Little Sunshine In"—and the newspaper paragraphers will have fun with it for a month. Yet it might drive the sunshine idea deep, where it belongs. The Department of Agriculture men believe so thoroughly in sunshine as a pig necessity that they have worked out plans for houses and accompanying "sunshine maps" which will show a farmer in any part of the United States just how to place the windows in his hog house so they will let in the maximum sunlight at any time from January to May. Tables with maps show the height—at top—necessary for the windows to be in order that the sun may strike the back line of the floor of the pen, at the given distances north of the window, at 10 A. M., noon, and 2 P. M., on the first day of each month from January to May inclusive.

The calculations are made for every two degrees of latitude from 30 to 48 degrees north, and for distances north of the window from 4 to 18 feet. This covers all ordinary widths of buildings and all parts of the United States. It is assumed, of course, that the windows front due south. The map shows what parts of the country are crossed by each of the parallels mentioned in the tables. By referring to the map anyone can tell approximately what his latitude is, and thus can see what figures in the tables apply to his locality. The map and the tables and the plans all are given in Farmers' Bulletin 438. Farmers' Bulletin 874, Swine Management, is another you should have.

Saving Fence Posts

If it costs 20 cents apiece to prepare and set untreated fence posts in the ground, and they last two years, and it costs 40 cents apiece to prepare and set posts treated with creosote, and they last fifteen years, which will you have? The answer is that as long as you're conscious and in your right mind you'll treat 'em. Isn't it? It means an annual average saving of $24 a mile in fence-post costs. The Department and the Louisiana Experiment Station have just learned the real value of creosoting posts in a test that lasted ten years. They learned that the saving I described above can be made. They used six kinds of wood. They applied hot and cold baths of coal-tar creosote to the posts by dipping them in an open tank. The posts were round, and three to five inches in diameter at the top. They had been cut several months before, and piled in a dry place to season. After they were dipped they were placed in the ground for fencing. That was ten years ago. Not long ago they were examined to learn the result. Black gum gave the highest record, with cypress only one point lower. Out of every 100 black gum posts treated and set, 97 remained sound, 2 were found with some defect, and 1 had to be removed on account of wood decay. Round cypress showed almost as good results. Two in every 100 had to be removed because of decay. Tupelo gum and sweet gum ranked next, with 89 and 87 posts sound, 6 and 11 posts defective, and 5 and 2, respectively, removed on account of defect. Sap pine—short-leaf and loblolly—showed 73 to be sound, 15 slightly defective, 9 badly defective, and 3 removed on account of decay. Bay—probably red or white bay—made the poorest showing, with 68 sound, 15 defective and 17 removed. The Forest Service of the Department can furnish fuller details about this test.

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"Ball-Band" Rubber Footwear gives you long wear, perfect fit, and real foot-comfort.

More than ten million people look for the Red Ball when they buy Rubber Footwear, because they know it stands for highest quality and More Days Wear. Sold in sixty thousand stores.

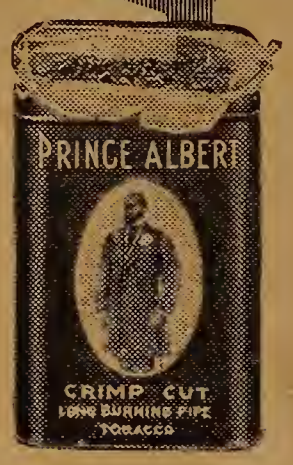
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305 Water Street **Mishawaka, Indiana**

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Useful gifts are always appreciated most. For Christmas this year why not give "Ball-Band" Rubber Footwear? There is a style and a size for every member of your family.





IF you haven't rung-in on the joys of a jimmy pipe with Prince Albert for packing you certainly want to get introduced inside the next hour! Talk about a pal-party! Why, it's like having a pass on a park merry-go-round early in June!

For, Prince Albert has brought pipes into their own—led *three men* to the utmost tobacco happiness where *one man* smoked a pipe before! P. A. has blazed the trail for thousands who figured they would have to do "Kitchen Police" on pipe smokes the rest of their lives!

So, climb into the P. A. pipe pasture and have a *real* smoke session! You'll soon get wise, all right, that Prince Albert never did bite the touchiest tongue in your township—and, it's a brace of aces against a two-spot that it never will fuss yours! Read on the reverse side of every Prince Albert package that P. A. is made by our exclusive patented process that *cuts out bite and parch!*

Give Prince Albert the speed-o taste-test and tongue-test *if you want to sing-smoke-songs-at-sunrise!*

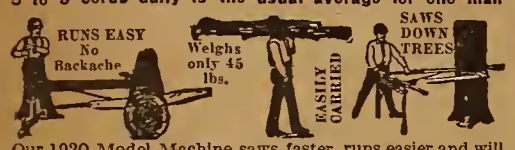
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Cupid Astride a Mule

[CONTINUED FROM PAGE 39]

Susan came forward to meet them.

"What's the matter?" she asked.

"The club," said Girard. "Call the club, please."

"Yes, sir."

It was a rural line; each telephone had its own signal. Susan rang vigorously, two longs and a short. Girard stood at her side, his hand on the counter. Fleming paced the floor, frowning, pinching his glasses. The talk around the stove stopped.

"Ring them again," directed Girard.

Over and over Susan's white hand described two slow circles and a quick one. Her ear was at the receiver.

"Everybody's talking to everybody," she announced impatiently. "Anything special, sir?"

"No—just the club, the club!"

The loafers came close. Dr. Fleming paced the floor faster. Once he looked at Davy; the look was not pleasant.

The door was flung open. A stout, rough, stubble-faced man, his vest open in spite of the chill, his shirt overflowing his belt in front, strode into the store—Uncle Ben!

"So here you are!" he blustered. "Your aunt Sally's been standin' on her head all day. Whar you been, you little—?" Uncle Ben saw the expectant faces about him and stopped. "What's the matter?" he asked.

"Don't know," replied Sam Long. "That gentleman over there's trying to get the club."

"The club!" cried Susan shrilly. "Yes, the club, the hunt club. The Hunt Club! *The hunt club!* Gentleman wants to speak to you. Hold a minute." She turned the receiver over to Girard.

The doctor stopped pacing. Uncle Ben forgot his prodigal nephew. Dramas like this did not occur every night in Gant's Store.

"Is Agnes Waring there?" called Girard. "Agnes Waring. Listen—W-a-r-i-n-g. Is she there?"

There was a long silence.

"Gone to inquire."

"Hello — yes — Agnes Waring. Went hunting? I know that. Did she get back? Has she returned? *Returned?* Who is that? Get somebody that can hear—one of the guests—anybody!"

There was no sound in the store but the hum of the stove, and the gnawing of a rat in the baseboard.

"Hello—that you Godfrey? This is Girard. Has Agnes Waring got home?"

Again there was silence.

"Are you sure? Godfrey, listen! Go and see if her horse is back! Look everywhere! Ask everybody! Call up Gant's Store—hear? Right away, man!"

Girard hung up the receiver and turned around.

"She hasn't got there," he said. His eyes met those of Fleming.

Uncle Ben pulled Davy aside.

"What's all this?" he demanded.

"Lady with these gentlemen lost."

"Whar did you git that gun?"

Davy hesitated. If Uncle Ben found that the gun was his he would use his foster father's prerogative and sell it.

"The lady loaned it to me."

Uncle Ben turned and strode up to Girard and Fleming.

"Anything I kin do?"

"Oh, I think she will find her way all right," replied Girard. "Thank you all the same."

Uncle Ben scratched the stubble on his chin.

"Wall, it's funny she ain't thar. Ought not to be out by herself. Ladies got no business ridin' alone in daylight, let alone night!"

As for the boy, he was lost in the crowd. His head did not reach the shoulders of the men; he could not hear what his uncle and Girard were saying. He was doing some hard thinking for himself.

If Agnes had passed the store she was probably safe. Any road she might then have taken would lead her to settled country where she could inquire the way. But if she had turned off before she reached the store, she must have taken the old lumber road into the swamp. This road, after rounding the marsh where he and Girard had hunted, branches out fan-like into neglected lumber trails. The trails enter the swamp, and after a mile or two comes to an abrupt end. Along these old trails she would not pass a house or a cabin.

Just outside the group of men huddled close together under the smoking lamp stood Susan. Davy pulled her aside.

"Susan, did anybody see the lady pass the sto'?"

"Not that I know of. You look all broke up!"

"She give me this here gun," he said pathetically. "Susan, whar's Jake Raines?"

"He was here up to a little while ago."

"How long?"

"Oh, just a little while." Susan turned away and stood on tiptoe to peer over the shoulder of Sam Long.

Davy looked round. Near the door stood black old Uncle Mose making silent signals to him. Davy nodded. Uncle Mose opened the door guardedly, and Davy followed him out into the night.

A quarter moon shed a thin light over the fields and down the white sandy road. Within the store they could hear the mumble of men's voices.

"Davy," asked the old man, "what was that Miss Susan say 'bout Jake Raines?"

"Said he left just a little while ago."

"I been a-cuttin' wood here all evenin' an' totin' it inter the sto'. Jake Raines, he lef bout half hour by sun. He ain't never come back. He got a jug hid in de swamp. He been drinkin' all day."

"Which way did he go?"

The old man pointed down the road in the direction of the swamp.

"Don't say nothin' 'bout what I tol' you—I's skeered of Jake Raines. He's a debbil when he's drunk." He shuffled away, his ax over his shoulder.

Davy stood shivering with nervousness and chill. The picture of Susan leaning over the counter that afternoon and talking

[CONTINUED ON PAGE 54]

Prize Contest Announcement

How My County Agent Has Helped Me to Make More Money

FARM AND FIRESIDE will pay $10 apiece for the five best letters on this subject from readers of the magazine, provided a good snapshot or photo of the county agent—in working togs, preferably—is sent with the letter. For letters accepted which do not have photos with them $5 will be paid.

If your county agent has kept you from losing money, or shown you how you can make more, or how you could farm better with less hard work, write and tell us how he did it. Maybe you will win one of the $10 prizes.

We believe in the county agents, and we know they are doing splendid work all over the country. We want to bring some of these personal experiences to the surface so they will inspire others to use their county agents more, and to get one if they haven't got one.

Keep your letter within 500 words. Address County Agent Contest Editor, care FARM AND FIRESIDE, 381 Fourth Avenue, New York City. Your letter must reach us before December 30th. We cannot return unused letters unless you enclose a stamped self-addressed envelope.

THE EDITOR.



Photo by Paul Thompson

Gathering mushrooms in a former brewery

Making "Hops" into Mushrooms

MUSHROOM lovers will see new reasons to rejoice over prohibition in the above picture, which was taken by flashlight in one of the large breweries of New York. "Cannons into plowshares," has been the cry, but now it will be "breweries into mushroom cellars." And there is probably not a single mushroom lover who will not swear that mushrooms are a much greater delicacy than beer anyhow, and everyone knows that mushrooms are about as rich in food value as beefsteak. Here's hoping that all former breweries will be used for as good a purpose.

W. S. A.

One Way to Give the Consumer Cheaper Milk

By L. B. Kilmer (Indiana)

THE city consumer is getting the farmer's point of view better and better every year, but there are still some city eople who are a little unreasonable in ifting all the blame for high living costs n the producer's shoulders. I met one of hese fellows the other day while in Chicago nd believe that he had a different feeling bout the matter when we parted. I appened to be in Chicago during the trike of milk-wagon drivers, who were nally granted an average wage increase of 9 a week per man. But the same day the trike ended the dealers stole a march on he consumers and raised the retail price f milk one cent a quart.

This naturally stirred up a protest gainst the "consumer paying the raise in vages," but that is hardly correct, for, as a vagon driver explained it to me, the wagons overing the smallest routes would, with he advance in price, average $5 a week ver and above the $9 increase to the lriver.

A working man speaking of the strike aid to me: "I call it an outrage to force people who work as hard as city people do, o pay such prices for food that little children need. It takes every penny that a poor man can earn to buy food, while the dealers and the farmers are getting rich."

"Just where do you get that farmer stuff?" I asked.

"Why," he replied, "I spent a week in the country last summer, and the farmers there lived like bloated millionaires—good clothes, automobiles, food going to waste everywhere, work done by machinery—why, say, man, the farmer is to be envied by such guys as myself."

I took a few minutes of this man's time right then to make clear a few things on the farmers' side of the question.

I made it plain to him on the milk question that where I lived (48 miles from Chicago) farmers were hauling their milk to the depots and receiving for 8-gallon cans of milk $2 a can, less 15 cents expressage, averaging a fraction less than 6 cents a quart. This same milk was then retailed for 14 cents a quart.

I further showed him that while the farmer received 23⅛ cents a gallon the dealer in the city received for that same gallon of milk 56 cents, making him a profit of 32⅞ cents a gallon, that while the advance in price to the dealer's customers paid the expenses there was no such thing for the farmer, who in most cases hired a boy to haul his milk to the station, or he or his son did it on their own time and expense.

The idea that prevails to a great extent in the city is that a farmer's time is his own, and therefore not worth much, just as the idea that what he grows, because he raises it, is cheap to him.

"The next time you go to the country," I told him, "do not sleep until 8 A. M. because you are a guest, but arise with the farm boys at 4 or 5 A. M., and watch them do the milking and feeding. Help them separate the milk, get it ready, and take it to the station. Take note, too, that the pure-food inspectors demand that the milker must be absolutely clean, wear white apron or clean white overalls—all of which means expense in clothing and laundry. Also that the cows that look so fine require a lot of careful feeding to keep them in condition. Frequently the inspectors weed out a cow or two and order them shot, which is a dead loss to the farmer, and cows cost a lot of money nowadays.

"Take note also that the barns usually have cement floors, and the care and upkeep of separators, cans, strainers, patent milkers, etc., means more time and expense.

"Then stay on the job until all the barns are cleaned and all the milk utensils are washed and aired, ready to repeat the operation, at the end of a long day. No union regulates these working hours—when the work is done they quit, not before. Also the cows must be milked and fed on holidays and Sundays.

"People who are clamoring for cheaper milk and food do not think of the labor involved in its production. They are well versed on their own side of the question, but they fail to get the other fellow's slant. They do not realize that the farm worker is the poorest paid of all laborers.

"We earn every dollar that we receive with the sweat of our brow, and because of this we are frugal and learn early to know the value of a dollar, and put it to the best possible use so that we are seemingly more prosperous than we really are."

I pointed out to this man that, rather than blame the farmer, he should consider that milk is being delivered the same as it was twenty-five years ago, and that the establishing of milk-distributing stations convenient to all sections of the city was the best way to lower retail milk prices.

He agreed that the idea sounded good, and thought that the farmer and the consumer should get together and put the plan through.

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THIS announces the offering of the last big block of the Canadian Pacific Reserved Farm Lands. Until this block is disposed of you can secure at low cost a farm home in Western Canada that will make you rich and independent. The country is ideal for mixed farming as well as grain growing. Later, the same lands can be bought only from private owners—and naturally, prices will be higher. Never again on the North American Continent will farm lands be offered at prices so low.

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C. M. MITCHELL
FARM AND FIRESIDE
Springfield, Ohio

Come With Me to This Corn Field

[CONTINUED FROM PAGE 16]

however, grow successfully on clay soils, thus giving the plant a wide range of usefulness. Evidently this plant is able to endure conditions of decided soil acidity, and yet we have on record a few experiments in which the luxuriance of growth has been increased by a moderate application of lime.

These are the three most popular catch crops for the Cotton Belt, and all three are favorite legumes for growing in corn fields. Hence it becomes worth while to consider the conditions under which each has the advantage of the other.

On the score of economy of seed, as indicated above, the velvet bean easily leads. For hay the cowpea is the most general favorite, but as the soybean becomes more generally known it tends to rival the cowpea where the farmer desires to produce hay from a legume grown in rows and partially cultivated. As a hay crop the velvet bean is not a competitor of the other two, since it tangles too badly to be easily cured for hay. For the same reason it is not ordinarily a competitor of soybeans for mixing with corn in the silo. For use in winter the velvet bean distances both of its rivals, the pods of which do not remain sound throughout the winter as do those of the velvet bean.

In general it may be said that the velvet bean is the all-round favorite of the cattlemen, while the hog raiser, if confined to but one of these legumes, would usually do well to give preference to the soybean over either the cowpea or the velvet bean.

Not least among the virtues of the velvet-bean plant is its resistance to diseases that attack many of the legumes, and the comparatively small number of insects that are capable of doing it serious damage. It is resistant to the microscopic eel worm, or nematode, that attacks soybeans and some varieties of cowpeas in certain fields. The velvet bean is not commonly attacked by mildew or other serious leaf disease. This comparative exemption from disease makes the velvet bean an especially useful plant in rotations in the southern half of the Cotton Belt.

In a later article, next fall or winter, the writer will doubtless have occasion to consider in further detail the value of the velvet bean for feed, and the extent to which velvet-bean meal has heretofore entered or may hereafter enter, into the nation's supply of dairy feeds.

NOTE: Mr. Duggar answers crops and soil questions from readers of FARM AND FIRESIDE whose problems originate below the Mason and Dixon line. He will be glad to answer any inquiry from you concerning the velvet bean if this article doesn't tell all you want to know.

THE EDITOR.

Wonderful Machines That Talk to Uncle Sam About You

[CONTINUED FROM PAGE 18]

and poultry? What amount did you spend in 1919 for manure and fertilizer? What amount did you pay in cash in 1919 for farm labor (exclusive of housework)? What is the estimated value of house or room rent and board furnished farm laborers in 1919, in addition to cash wages reported above?

How many acres of this farm is provided with artificial drainage (tile, ditches, etc.)? How many more acres in this farm could be made suitable for crops: (1) By drainage only; (2) by drainage and clearing?

Then comes a series of questions asking the number and total value of live stock, by classes and ages, on your farm January 1, 1920.

How many gallons of milk was produced on your farm in 1919? (Include milk fed to animals, consumed on farm, sold, or otherwise disposed of. One hundred pounds equal 11.6 gallons.) Give gallons and value of milk sold, and the same for cream sold. Give pounds and value of butterfat sold, the pounds of butter made on the farm, and the pounds and value of butter sold. Give pounds of cheese made on the farm.

Give number of sheep shorn in 1919, and total weight and value of fleeces.

Give the number of dozen of eggs produced in 1919. (Include only chicken eggs produced, whether sold, used, incubated, or otherwise disposed of.) Give the dozens of eggs sold in 1919 produced on this farm, and the value. Give the number of chickens raised in 1919. (Include all chickens raised, whether sold, consumed, or on hand.) Give the number and value of chickens sold in 1919. (Include those raised on this farm sold alive or dressed.)

How much honey did you produce in 1919? (Include all honey, whether used on the farm, sold or otherwise disposed of, in pounds.) How many pounds of beeswax did you produce?

Then the schedule asks about the number and breed of pure-bred animals on your farm January 1, 1920. These include mares and mare colts, stallions and stallion colts, cows and heifers of all ages, bulls and bull calves, sheep and lambs, hogs and pigs.

How many calves, lambs, and pigs did you raise on your farm in 1919? (Include all young animals born in 1919, which have been retained on the farm, sold to others, or slaughtered for food. Do not include any young animals purchased, or any that died.)

How many cattle and calves, hogs and pigs, sheep and lambs, were slaughtered on your farm for food during 1919, and how many pounds of meat and meat products were sold?

What is the value of products of this farm sold to or through a farmers' marketing organization in 1919? What is the value of all farm supplies purchased for this farm from or through a farmers' organization in 1919?

Next comes the questions about the crops harvested on your farm in 1919. The schedule asks for the number of acres harvested, the quantity harvested, and the quantity sold or to be sold. It does not ask for the prices or the amount you received for them. It does ask the value of all vegetables, including white potatoes, and sweet potatoes, grown in 1919 for home use only, and these questions about each vegetable produced in 1919 for sale, not for home use: Number of acres or fraction of an acre harvested, quantity harvested, unit of measure, and value.

Under "Orchard Fruits" the schedule asks the number of trees of bearing age and the number not of bearing age on January 1, 1920, and the total quantity harvested and the quantity sold or to be sold from the 1919 crop of these fruits: Apples, peaches, pears, plums and prunes, and cherries. Under "Small Fruits" it is desired to learn the number of acres or fraction of an acre harvested; quantity harvested in 1919, and the quantity sold or to be sold of these fruits: Strawberries, raspberries, blackberries and dewberries, loganberries, cranberries, currants, and other berries.

How many pounds of dried fruits, not raisins, were produced on this farm in 1919? How many gallons of cider? How many gallons of this cider was made, or will be made, into vinegar? The number of grapevines of bearing age and the number not of bearing age on January 1, 1920, is asked, the total pounds of grapes produced for all purposes, pounds of grapes (fresh) sold or to be sold, pounds of raisins and dried grapes produced, and the grape juice (in gallons) produced on this farm.

Then these questions about forest and forest products: Number of acres of merchantable timber in this farm January 1, 1920 (trees mostly of saw-log size); value of all forest products of this farm in 1919 which have been sold or are for sale (include standing timber sold and cut in 1919, firewood, fence posts, cross ties, pulpwood, logs, poles, bark, turpentine, naval stores, and other forest products cut on this farm); value of all forest products of this farm in 1919 which have been or will be used on this farm.

Hog cholera every year costs the farmers of America forty millions of dollars, says one authority. Yet it costs only a couple of dollars at the most to vaccinate a pig.

The old Indian plan of curing seed corn has a lesson for the farmer of to-day. The Indians laid it on an open willow-branch platform where the air could circulate freely until it was dry. Then it was safely stored for winter.



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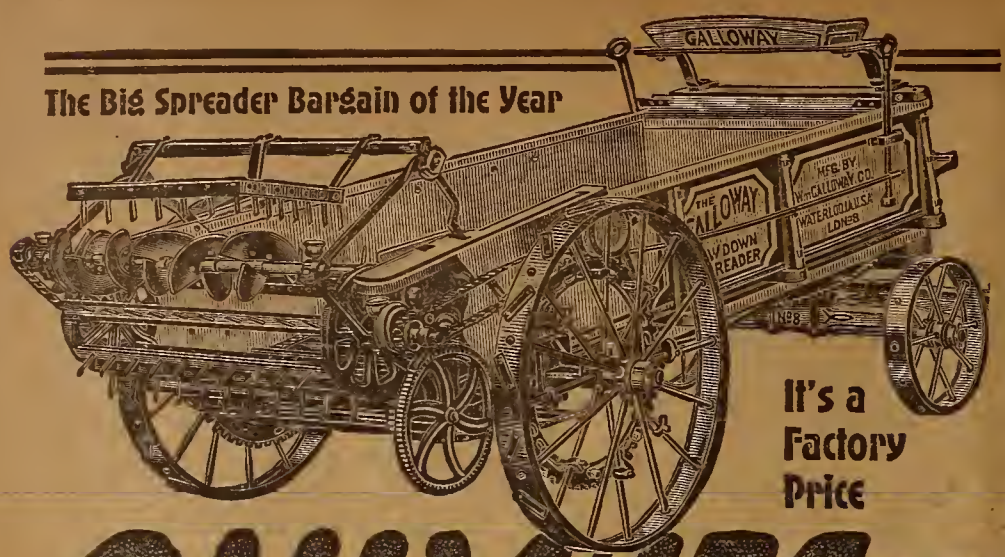
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Beryl Hammer and Rolo Mercena De Kol

The Story of a Record-Breaker

PROBABLY no more spectacular achievement in breeding circles ever occurred than the recent annexation by Beryl Hammer, a 23-year-old Canadian, of four world's records and six Canadian records in butterfat production and his sale of one cow, Rolo Mercena De Kol, for $26,000 to Coldstream Farms of Lexington, Kentucky, at the National Holstein Sale. A few months ago practically unknown as a dairy farmer, Hammer's success to-day is talked of throughout Canada and the United States. Of the record cows he has handled, Hammer is probably proudest of Rolo Mercena De Kol, 41.54 pounds of butterfat in seven days and 160.27 pounds of butterfat in thirty days, and holding every world's record in butterfat production from one to thirty days.

Hammer's rise to fame reads like a romance. He grew up on a dairy farm, and when his father dispersed his herd in March, 1918, the young son bought several head. Rolo Mercena DeKol was purchased at this time for $320. He started "on his own" heavily in debt for a farm.

It is told of young Hammer that since a mere youngster he has been a "crank" on the subject of Holstein breeding. His father had one pure-bred cow in the herd. The youngster was determined to test her, and he did it, too. How? Each noon he went out into the pasture to give her a special feed, and to milk her the extra time a day. He carried the samples to the local cheese factory to be tested. In a practical way, neighbors probably said, the test was a waste of time. Yet was it? It started him to studying breeding lines and scientific feeding, and indirectly to attaining his record-breaking performance of the past winter.

At sixteen he persuaded his father to buy the dam of the 50-pound cow. She cost the older Hammer just $25.50, registration papers and all. The youngster liked the looks of the cow, which had recently suffered an accident, and the purchase was made. This "cheap" cow was bred to a bull with excellent ancestry, and the daughter was Rolo Mercena DeKol. J. T. B.

Perhaps Lime Would Help Your Crop Yields

ARE you using the vast store of fertility with which the air over your farm is supplied? All the clovers and other leguminous plants, such as soybeans and vetch, are constantly busy gathering this supply of nitrogen, and converting it into a form which they can use, and which is left for the use of other plants. These nitrogen-gathering plants either will not grow at all or else do not do their best unless the soil is sweet.

Most other crops do best in a sweet soil, and are injured by acid. The one way to be sure that your soil is not acid is to test. If you find that it is, the sooner you apply sufficient limestone to correct this acidity, the better for all your crops.

At a recent meeting of representatives of the various experiment stations from the Southeastern States, held at Knoxville, Tennessee, the following resolutions were adopted that apply equally well to all regions in need of lime:

"1. The agreement is unanimous that the soils of the Southeastern States are seriously deficient in lime, so that liming is essential to their most profitable development and permanent improvement.

"2. Suitable agricultural lime materials are high calcium, magnesian and dolomitic linestome; also high-grade oyster shells and marl, together with the burnt products (or the chemical equivalent of such) of any of these in the amounts hereafter recommended by this Conference.

"3. *The finer the limestone is ground, the greater is its immediate availability.* Limestone ground to pass through a ten-mesh screen, all finer particles included, is recommended for the common application of two tons per acre. Either very finely pulverized limestone or burnt lime is recommended where an application of only a few hundred pounds per acre is to be made.

"4. For general use we recommend an application of one to two tons of ground limestone per acre, or one half that amount of burnt lime, once in a rotation of not more than five years. For alfalfa and permanent pasture, an initial application of double these amounts should be ma

"5. Lime may safely be used at a point in the ordinary farm rotation with serious loss of the material. If applied connection with tilled crops, its mixt with the soil will be insured. The effe of lime are likely to be in proportion the thoroughness with which it is mi with the soil in which the crop ro develop.

"6. *Liming is most profitable in th rotations in which legumes are promine* but over large areas in these Stat especially on the heavier types of s liming is profitable for corn, small gra and grasses.

"7. With soils poor in potash a phosphate, liming gives best results o when supplemented by materials carryi these constituents." W. A. S.

NOTE. If you think your soil might be ac and do not know how to determine for sure if you know it is, and don't know where to lime, write to me 381 Fourth Avenue, N York City, and I will tell you what you w to know. THE EDITO

Can You Sell What You Grow?

PRODUCTION is only half of the business of farming, as many have learned from hard experience. There are lots of stunts about marketing that will make you more money, and our Marketing Expert is always glad to tell you the things he has picked up in eight years at the world's largest live-stock market—Chicago. Readers of FARM AND FIRESIDE are familiar with Thomas J. Delohery through his series on marketing which have been appearing the past year. He is always glad to be of service, and if you will tell him what you want to know he may be able to help you top the market with your fat stock and produce. Always give full details, and address Thomas J. Delohery, 381 Fourth Avenue, New York City.

THE EDITOR.



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How to Fool the Mink

By Robert E. Hewes

THE mink is the fox's smaller brother when it comes to wariness. He is exceedingly sly, and possesses a cunning that is almost human. Usually an elaborate set of rules are laid down for trapping the mink. I myself have found that the same methods used for foxes are equally good in the case of the mink. Both are equally sly, possess similar habits and appetites, and I think you will find, as have I and many other trappers, that the methods good for one are good for the other. The main difference is that the mink not only is found in the woods, but is also fond of following streams.

Along creeks and rivers a fine set for him is to place a piece of fish or rabbit on a stick about eight inches above water and a few inches from shore, and set a trap between the shore and the stick, about three inches under water, and covering it with water-soaked leaves. Fasten your trap chain to a piece of wire, and place this in deep water so that your mink will drown. A No. 1½ trap is the right size.

The mink is a bloodthirsty animal, being an inveterate poultry thief, and if he has any good quilities he succeeds remarkably well in concealing them.

This is What Limits Your Profits

By Charles P. Huntington (Illinois)

ARE the profits from farming limited? Yes, I suppose one must answer that they are, for crop yields are limited by the weather, climate, cultural conditions, seed, soils, etc. But in other ways they are certainly unlimited.

I make it a practice frequently, after the day's work is over, to crank up the car and ride about the country. I am never disappointed, for each time I discover something new and something interesting and worth while to my business of farming and dairying. Last evening while riding I noticed a field of wheat, cut and shocked, which was exceptional—we have had a very dry, poor season for small grains in this section—so I drove into the yard and asked the owner how he had such a fine crop of wheat when others were so comparatively poor. He told me that it was planted on new ground, ground that had raised only one previous crop, and that he expected it would raise good crops for several years yet.

I told him he might make it always raise exceptional crops if he would give it proper treatment, but he shook his head and advised me to look around the country some more, and see if I found any fields which were producing exceptionally that had been under cultivation as long even as twenty years. I know of only one such field within a radius of ten miles of my farm. But in a few years I am going back to that same man, invite him to ride home with me, and then I shall show him a whole farm that is producing exceptionally, and one that has been in crops for sixty years.

I did not stop long enough to discover this man's theory of soil fertility, but long enough to know that he believes his yields must necessarily decrease each year. This belief limits his profits accordingly. Nearly everyone knows now that we may steadily build up our soil, and that it will pay a good profit while we are making it as fertile as it was in its virgin state. And if we go even further than that and actually make it richer than it ever was, who can say what the limit of production per acre may be?

Almost all of us who read this paper are stockmen, or at least we keep some stock. And if the profits from farming and crop production are unlimited, they are certainly so from stock-raising, horse-raising, dairying, etc., for no one can say just how much milk our cattle will produce, or what price we may receive for our surplus stock, if they be pure-bred. Many bulls, both beef and dairy, have sold for tens of thousands of dollars, and horses and hogs and sheep have likewise brought tremendous prices.

So when we feel despondent about farming as a business, when we think how little profit we are receiving, let's think, too, how very unlimited our opportunities are. Let's resolve that we will build up our soil each year, and that we will raise registered, pure-bred stock, and we will find our profits increasing until we will wonder ourselves if they really are limited. And then, when we begin to wonder and think, the answer will come: Yes, the profits which a farm may yield are limited. They are limited by the size, broadness, progressiveness, and capacity of ourselves.



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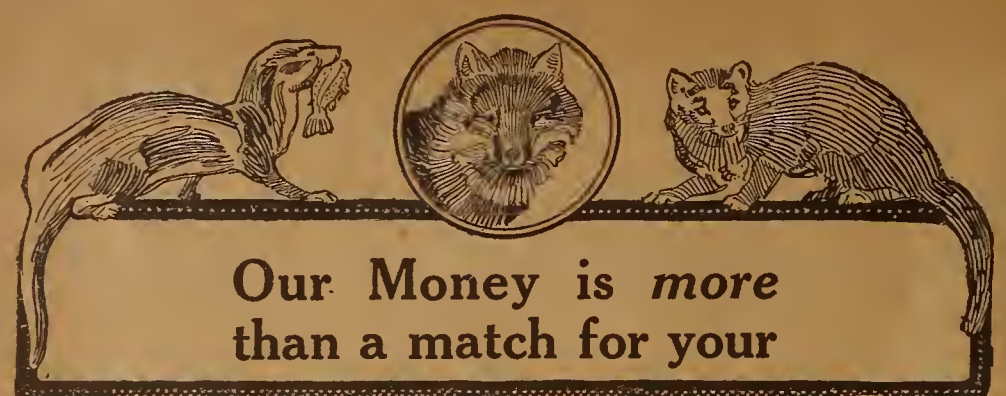
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Cupid Astride a Mule

[CONTINUED FROM PAGE 48]

into the face of Jake had come into his mind.

"That Jake Raines," he muttered, "He's got somethin' to do with this—the ornery critter!"

"He dared not mention his suspicion to the men in the store. If there were no grounds for it he would get in bad with his neighbors. Also he could not betray the confidence of Uncle Mose. He leaned against the store, breathing hard.

"I'm a-goin' to try it!" he exclaimed. "It ain't a-goin' to give me no rest till I do."

He went out to the fence to get his mule. A dozen horses and mules were tied out here, but no Pete. The plank he had been fastened to was gone with him. Davy pulled off his hat and scratched his head, thinking, thinking. Then he ran back into the store. Uncle Ben was taking full advantage of his knowledge of the locality to hold the center of the stage. Girard was questioning him.

Davy spoke to Susan.

"Gimme a box of matches!"

"Where are you going?"

"Nowhar. Gimme a box. I'll pay you nex' time I git hold of a penny."

He came out and closed the door. He rammed two shells in his gun, and started running down the road, his overcoat streaming out behind, his dim shadow waving grotesquely under him.

"God A'mighty!" he panted. "God A'mighty!"

[CONTINUED IN THE JANUARY NUMBER]

Is Your Stock in Good Shape?

IF ANY of your animals are critically ill do not wait to write to us, but get a local veterinary at once. But if there is nothing seriously wrong, only symptoms of sickness or parasites that seem to defy all well-known remedies, write to Doctor Alexander, and he may be able to put you on the right track. He has cured many sick animals in his lifetime, and is recognized as one of the leading authorities on this subject. When you write be sure to give full details, including age, sex, breed, weight, and a description of the symptoms in full. Address Dr. A. S. Alexander, 381 Fourth Avenue, New York City. THE EDITOR.

The Wily Fox

By Robert E. Hewes

BRER FOX has shown an alarming increase in numbers during the past two years in many sections. He has not become domesticated like the skunk, but when building his den seeks the wildest and deepest parts of the woods in each locality. He is a sly and wary animal and a tough proposition to trap, as many a farmer boy knows.

Setting a trap in his den is a ticklish business. He will quickly notice anything unusual, and care must be taken not to disturb anything. It is best to set several traps at one place (use No. 2), and while Brer Fox is tiptoeing about with his attention centered on one or two he will likely step into another. It is hard to watch four feet at once. Your traps should be set in little holes, level with the ground, and covered with fine earth. Place a piece of moss or some dry leaves under the pan to prevent the dirt from clogging it. Some use cotton, but I have found that the fox often smells this. He can smell the iron scent of the traps too, and before using them it is important to dip them in blood or to coat them with melted beeswax to kill the iron smell. Always wear gloves which have been well rubbed with earth. Never touch anything about the set with your bare hands.

It is unwise to use bait at a den. Brer Fox knows it has no business there, and is suspicious accordingly. The fox usually travels well-beaten paths, and you can easily find his trails in the woods or across fields. You may fasten a piece of rabbit or a mouse on a tree near such a path, about two feet high, set a trap under it about ten inches from the tree, and count on having any passing fox stop to investigate. In attempting to get the bait he will instead be caught. In the case of a particularly old and wise fox it is often well to set several traps around the same tree, ten or more feet away from it. In circling about the tree,

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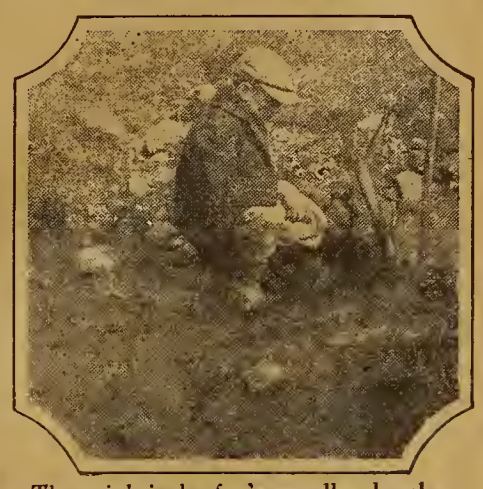
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which caution tells him not to approach too close, the fox will usually sooner or later step into one of these traps.

If you can find where the fox crawls under a fence there is a good place to set a trap. Not directly under the fence, mind you, but a foot or so either side of it. In all cases never stake your chain near the trap. Fasten the chain to a piece of wire about ten feet long, and stake the end of this wire or fasten it to a tree, stone, etc.

These hints are just about all that experience teaches me, and can be put down on paper for the guidance of fox trappers. The rest is up to you. There will come up peculiar circumstances in different cases which will demand individual thought on the part of the trapper. But do not become discouraged if you fail to catch a fox the first few weeks. Follow these rules, and sooner or later you will be rewarded, if you are careful and conscientious in making your sets. I tried a long, long while before I caught my first fox, but I have made up for my trouble since then.



The mink is the fox's smaller brother when it comes to wariness

Brer Fox, it might be added, has been declared an all-around enemy of the farmer, the few mice and rats he eats does not offset the numerous chickens he kills.

Is Your Automobile Insured?

I WON'T soon forget the car which we bought a year ago, and which for some unknown reason we neglected to insure. It never occurred to us that it was not insured until one day it was stolen in a nearby city. Although the loss was not a severe one, it was nevertheless a total loss, as the car was never found. This spring we purchased another, and the insurance policy was included in the cost of the car.

Thousands of dollars are lost each year through neglect to insure automobiles. Probably each owner whose car is stolen thinks that his car is immune to the bands of thieves who systematically steal and dispose of their acquisitions in large cities or out-of-the-way places, where the chances of recovery are very slight indeed. But the fact remains that clever crooks continue to work, and especially with the low-priced makes.

There is but one way to prevent this loss, and that is to insure as soon as you get your machine. The various switch and other locks help, and no doubt prevent many thefts, but they are not absolute protection, for the man who makes a business of stealing is prepared to pick the best of locks.

> LOTS of land and big muscles will pay, but less land and plenty of active brains may pay better.

Nor can the police prevent it, because for all they know the crook may be the owner. I know of one case where the nervy thief actually got the "copper" to crank the car for him, and then drove jubilantly away. Insurance against theft and loss by fire is inexpensive, but the number of uninsured cars which are lost is surprising.

Insurance against accident is not so important in the country as in the large city, but is still worth while if you do much driving. This sort of a policy insures you against damages resulting from hitting someone, or protects you in an accident which disables your car. Most automobile policies are for the period of one year only, so if your agent forgets to remind you when your policy expires do not neglect to have it renewed, because your car may be stolen that very day.

S. S. S.

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mind, let's hear from you

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stead Father showed his good interest by
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as I pleased; he also gave me a young
sow, and I had bought a thoroughbred
heifer with what profit money I received
from the land. I was winner in our town-
ship in a corn contest, and first prize in the
stock-judging contest sent me to Farmers'
Week at Columbus, Ohio, in 1917. I co-
operated with our county agent, and
pulled off some good experiments in fer-
tilizing and seed-collecting. Wasn't that
getting started fine? But then if Dad
hadn't taken an interest on the farm, do
you think I could have been contented?
But death is a great interrupter of plans,
so here are a few lines asking your advice.

"Your paper is my favorite; keep up
your good work.

"At your service,

"PRIVATE VIRGIL M. BENEDICT."

And this is the reply:

"MY DEAR PRIVATE BENEDICT: I feel some freedom in replying to the questions in your letter, because you know what farming means. I can't be so free in advising city people who want, or think they want, to go on the land, because ordinarily they think they ought to be able to take every figure you give them and make it stick as a hard-and-fast basis for computing the first year's profits. The figures I shall presently give you will not be capable of that kind of manipulation. Nobody could give you any that would be.

"My figures, I feel, are reliable because I have consulted federal experts, to whom I presented your specific case; but they will be general in character, and you will have to use your own land in adapting them to your use. For you have told me only in barest outline of your training and the conditions under which you wish to take up farming, and I can't know your personal likes and dislikes, your special qualifications, your special bent, and all the other things that enter into the matter of getting into the farming business and affect your success in it.

"All right, now let's get down to your questions: The big one in your mind, I see, is whether you shall take up a claim or buy a deserted farm.

"I would do neither one, for these reasons:

"Secretary Lane's plan for helping soldiers to get on the land has not become a law, as this is written, and there's no telling when it will be. I believe Congress is willing to enact his proposals, or some such legislation, to help those soldiers who really want to farm to get started; but Congress after looking ... can do better in established farming sections. New agricultural projects on the frontier are full of uncertainties.

"The reason I advise against buying a deserted farm is because I don't believe there are any—not out in your part of the country at least. There may be a few, but they are being taken up rapidly. Land in that section—Iowa and some other Middle West States—has recently entered upon a new boom, anyway, and I consider it a bad time to buy.

"But it looks to me as if it were a good time to sell. I don't know where your father's 30-acre fruit farm is, but I should guess that, with the best land out there in Iowa now selling for $300 to $500 an acre, you might get around $10,000 for it.

"Take that $10,000 and go South. I believe the greatest farming opportunities to-day, without a doubt, are in the South. I'm not alone in that belief at all. It is a fact the whole country is awakening to. With that $10,000 you can buy from 100 to 200 acres of land in Mississippi, say, which will be fundamentally as good as Iowa soil. And you have the advantage of a longer season and a milder winter.

"I'm thinking now of what are known as the Black Lands of northeastern Mississippi. It's a great farming country that hasn't yet fully come into its own. I believe opportunity is there. It's prairie land much like you know up in Iowa and Illinois. Legumes like alfalfa, lespedeza (Japanese clover), peanuts, or velvet beans, and corn, hogs, and some cotton make up the winning combination there. The idea is that the long season allows the grazing of hogs nearly the year round, and all they need in addition is a supplemental feed like corn, peanuts, or velvet beans. You can grow all the fruit and vegetables you want, and you can have a garden the year round. Cotton is a good money crop, but the Northerner would take it up gradually. Its economical production almost requires negro labor, and the Northerner will have to learn to handle the Southern negro.

"That brings up another matter: If I were a Northerner going into that country I would try to locate in some of the sections where Northerners have settled. I say that to you because in the Black Lands large plantations are the rule, and if you got a piece of land surrounded by them you might get lonesome. The plantations are worked by negroes, and they might be your only neighbors. That isn't the reason they are called Black Lands, however, as you probably know. It's because the soil is a black, rich type.

"There are a number of colonies of Northerners in northeastern Mississippi, and I have no doubt you could find the kind of land you want among them as well as anywhere else. It ought not to cost more than $75 an acre, and much of it is cheaper. In some other parts of the South you can get some of the best farming land for $25 an acre. That's what good black, waxy land around Montgomery, Alabama, is selling for. And for hog-raising it can scarcely be beaten anywhere.

"Just as important as choosing the right neighborhood is the leaving behind you of your Northern prejudices and preconceived ideas about the South. You probably think it's a far cry from Iowa to Mississippi, if you've never been there. You'll be surprised at the similarity of the two places. But you will be in a different social atmosphere, and if you are going to be contented you ought to look carefully to this side of the venture. The Southern farmer doesn't farm like the Northerner. He does little of the physical work himself. But you'll get along all right with him if you don't tell him how they do it up North, or how he could improve his methods.

"You will find much of that land down there with improvements of one kind or another. There will be old homes and cabins—old but usually well built, and, although they are not valued highly locally, the man who knows how can make good use of them for farm buildings. I would advise you to look carefully to the water supply. In that section the water has a good deal of lime in it, and some people—especially older people—say it doesn't agree with them. Some of it has less lime, and I believe you could find satisfactory water if you took care to watch for it. It's a healthful country, and you will not find the summers any hotter than in Iowa.

"Steer a wide course from real-estate men in getting information about the land. Ordinarily their one aim is to sell land, and they are not careful enough in what they say about it. Not long ago a city man got a very glowing circular from a Chicago 'developing company' offering him 10 acres of land in Florida for the surprisingly small sum of $2,500—a 'peanut unit' the circular called it. He could grow, the circular said, a thousand bushels of peanuts on his 10 acres, and could sell the peanuts—allowing for low prices—at $2 a bushel. The city man was impressed, but he sent the circular to the U. S. Department of Agriculture with a query as to whether or not the investment was a good one. Here are some sentences from the reply he got:

"'The literature is of the kind designed to deceive city people in the North and West who do not know anything about farming.... The average return from 10 acres of peanuts would not exceed $300 to $500.... You could buy a 100-acre farm in almost any of the counties of we Florida, including the one mentione the circular, for the price these peop for 10 acres.... The whole "unit" s whether it is pecans, peaches, figs, peanuts, hogs, or what not, is sim means of selling land at three to five what it is worth to ignorant or u small investors.... To pay $2,500 f 10 acres of land would stamp you "sucker" of the rankest class.... A is without reflecting in any way on Fl for it is a good State and lands are paratively cheap there.'

"Instead of real-estate men I wou the county agent about the agric value of the land. You probably k is the representative of the U. S. D ment of Agriculture and the state a tural college in the county. All counties down there have county a and they'll be glad to give you advi would advise you to go down there as as you return and look the prop over. Visit several Southern sectio you can't find something you want away. You can afford to take a time to look over the field, and I am a certain you will not regret going S Whatever you do, don't buy a piece of until you have seen it. And reme there is good land and land that *looks* good land.

"Yes, the federal farm loan banks let you have a loan equal to 50 per c the value of the land. But that is o land, unimproved. They will allo 20 per cent on the value of improve That is, on an improved farm val $6,000 they would fix some amoun $4,000, to represent the actual land for the 50 per cent loan. You cou 20 per cent of the $2,000 remainder. ever, I don't believe you will need t row money if you can sell your 30 a Iowa for a figure near the one I gave

"I don't think you will have any culty in appreciating why I am ad against locating on high-priced land Iowa the land investment is so high t is difficult to make a good interest o investment. The average return o investment in Iowa farms, you may b prised to know, is only 2.6 per cent. ers there depend on the increase in v their land to make up for that. T more profit in this farming business f man who starts on cheaper land, if it' land—and for productivity the best S ern farms are just as good as the bes can find anywhere else.

"I'm sending you a number of soi veys of Mississippi counties, and a sp report on the prairie regions of Miss and Alabama. These are published b U. S. Department of Agriculture or by department in co-operation with agencies. They describe the kinds of tell their agricultural value, and recommendations for improving where they need it. They give you a ty good idea of the crops grown, yields so on.

"With these I am also sending you bulletins of the Department of Agric on hog-raising, alfalfa, peanuts, ve beans, and lespedeza. You will wan know more about these things if yo South to farm, for they, with corn, are vehicles in which Southern agricultu traveling forward at a rapid rate nowa If you become interested in that Miss pi region and want some more detaile formation about it, you can get it from Mississippi Agricultural College, Ag tural College, Mississippi, and from State Geologist, Jackson, Mississippi.

"Good luck to you, and write me if I can be of help to you."

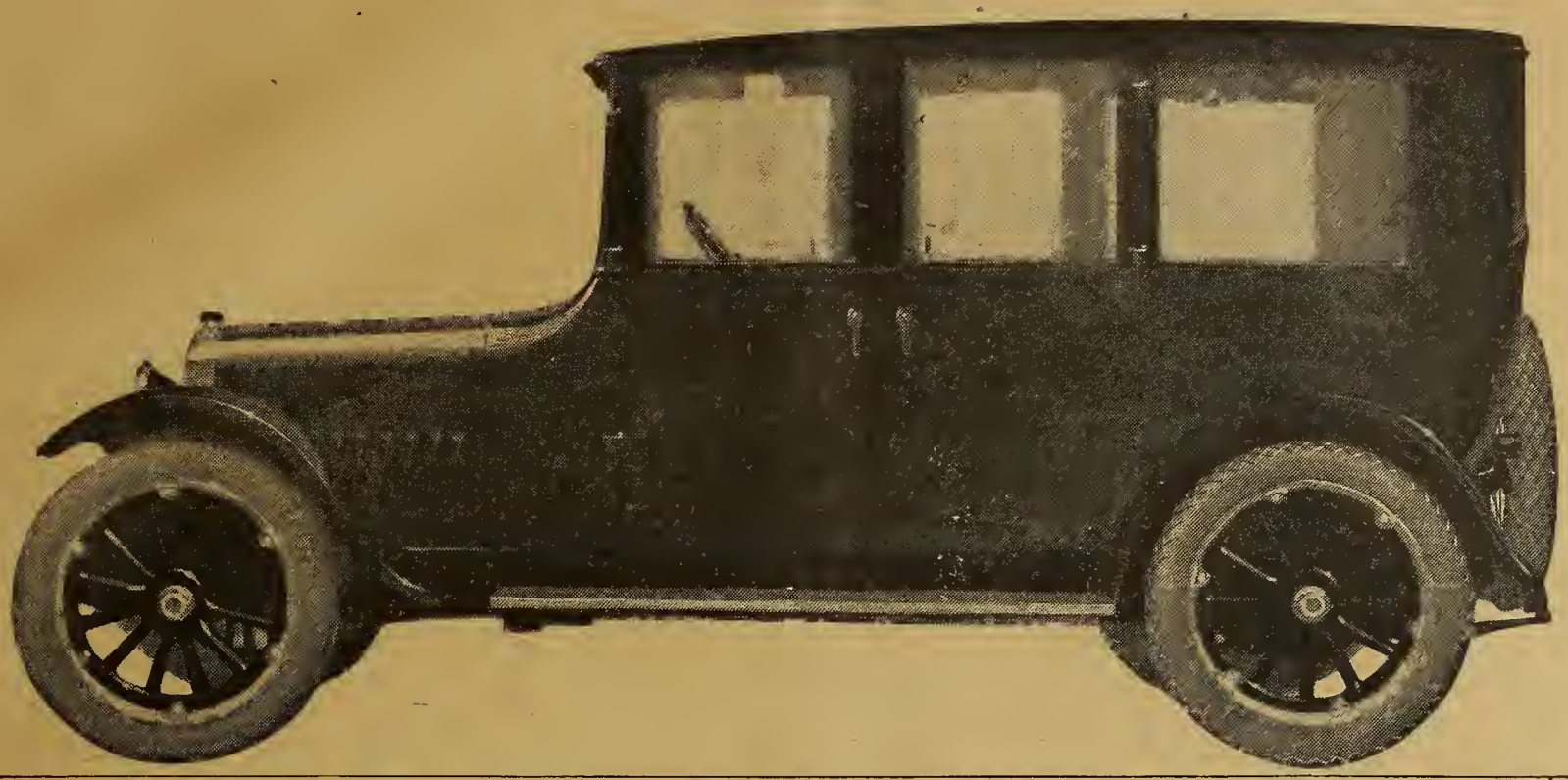
'Scuse Us, Mr. Mooney!

We made a mistake in the printi J. R. Mooney's letter in the October i and we are sorry. We said he was a porter and breeder of Tom Barron's s of Single-Comb Brown Leghorns, wh should have said White Leghorns. apologize to the chickens too. No v chicken wants to be called brown; brown one, white.

George Martin

Oakland

OAKLAND OWNERS REPORT RETURNS OF FROM 18 TO 25 MILES PER GALLON OF GASOLINE AND FROM 8,000 TO 12,000 MILES ON TIRES



THIS NEW OAKLAND SENSIBLE SIX FOUR DOOR SEDAN IS POWERED WITH THE FAMOUS 44-HORESPOWER, OVERHEAD-VALVE OAKLAND ENGINE

OAKLAND
SENSIBLE SIX

MORE to the farmer, perhaps, than to any other class of Americans, should the comfort, the utility and the value of this new Oakland Sensible Six four door Sedan appeal. It is a car affording him secure and sheltered travel in every season, a constant return in usefulness from his investment, and a reliability of mechanical action especially welcome in districts where garage facilities are few and far between. Every essential convenience, from mechanical lifts for the windows in its double-latch doors to an inconspicuous heater for use on cold days, has place in the equipment of this commodious and attractive Sedan. Of solid body construction, and built upon the standard Oakland chassis, its range of activity is fully as great as that of the open car.

TOURING CAR, $1075; ROADSTER, $1075; COUPE, $1825; FOUR DOOR SEDAN, $1825
F. O. B. PONTIAC, MICH. ADDITIONAL FOR WIRE WHEEL EQUIPMENT, $85

OAKLAND MOTOR CAR COMPANY
Pontiac, Michigan

MOTORIZE THE FARM



AFTER doing much of the market hauling of thirty-two farmers around Eden Prairie, Minnesota, with a motor truck on Goodyear Cord Pneumatic Truck Tires, Mr. C. P. Page states: "I would not use solid tires again under any consideration. Hills, mud and storms don't stop the big, tractive Goodyear Cords. Their cushioning is saving truck repairs and depreciation. They also are saving gasoline and oil. I now haul more milk and other loads in less time, find the work far easier, and note that the pneumatics save our roads. Several people have adopted them as a result of my experience with Goodyear Cords."

THE experience described above affords an excellent example of what pneumatic truck tires are accomplishing for farmers. Every limitation hitherto placed on the farm use of motor trucks by solid tires has been removed with the perfected pneumatic tire. For this reason, Goodyear's pioneer work in developing cord pneumatic truck tires has been extremely opportune; it has led to the more extensive use of farm trucks during a serious scarcity of farm labor. Now, farmers are finding it extremely advantageous to employ Goodyear-Cord-equipped trucks with other time-saving motor units and, thus, to motorize their work quite completely. Special information concerning the use of pneumatic-tired trucks on farms may be obtained from the Motorize-The-Farm Department of this company, at Akron.

GOODYEAR

MADE IN U.S.A.